

Columbia University Bulletin

SCHOOL OF DENTAL  
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University  
Bulletin

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School of Dental  
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# History and Mission of the School of Dental and Oral Surgery

## HISTORY OF THE UNIVERSITY AND THE SCHOOL

Columbia University began as King's College, which was founded in 1754 by royal grant of George II, king of England, "for the Instruction of Youth in the Learned Languages, and the Liberal Arts and Sciences." The American Revolution interrupted its program, but in 1784 it was reopened as Columbia College. In 1912 the title was changed to Columbia University in the City of New York.

King's College organized a medical faculty (College of Physicians and Surgeons) in 1767 and was the first institution in the North American Colonies to confer the degree of Doctor of Medicine. The School of Dental and Oral Surgery traces its origin to 1852, when the New York State legislature chartered the New York College of Dentistry, later renamed the New York College of Dental and Oral Surgery. In 1916 Columbia University, having recognized dentistry as an integral and important part of the health sciences and a true university discipline, established its own school of dental education. Shortly thereafter, the new Columbia University dental school absorbed both the New York Post-graduate School of Dentistry and the New York School of Dental Hygiene. In 1923 it was joined by the New York College of Dental and Oral Surgery to form the present School of Dental and Oral Surgery of Columbia University, thus completing a series of unique and complex mergers.

The institution has remained a leading force in dental education and research ever since its establishment. In the early 1920s Professor William J. Gies of the Columbia Biochemistry Department established the International Association for Dental Research, the first organization devoted exclusively to research in the field of dentistry. In 1926 Professor Gies prepared the report *Dental Education in the United States and Canada* for the Carnegie Foundation for the Advancement of Teaching. This was a major critique of dental education in the United States, and its publication resulted in the acceptance by dental schools throughout the country of the basic educational policies and objectives developed at Columbia University.

The Columbia-Presbyterian Medical Center was opened in the spring of 1928 at its present location, after the establishment of a permanent alliance between Columbia University with its College of Physicians and Surgeons, School of Dental and Oral Surgery, School of Public Health, and School of Nursing; the Presbyterian Hospital and its subdivisions; the New York State Psychiatric Institute; and the Washington Heights Health Teaching Center.

## DENTISTRY: PRESENT AND FUTURE

In recent decades, complex societal and governmental forces have had an increasing influence on dental education and the practice of dentistry in the United States. Government has come to view health services in the same light as public utilities, and members of the public have come to view themselves as active participants in the health care system rather than as passive recipients of treatment.

Through advances in research and through the evolution of newer modes of practice, the field of dentistry has developed the capacity to deliver quality dental care to





large numbers of individuals. A yet unsolved problem is how to devise ways of using this great capacity to provide care at a reasonable cost to a greater proportion of our population, including those who do not now have adequate and easy access to dental care because of poverty or special problems such as handicaps, age infirmities, or remoteness of location.

Just as the practice of dentistry is undergoing considerable change, dental education similarly faces a number of challenges for the future. The School of Dental and Oral Surgery is responding to these challenges through the development of new instructional programs that emphasize the importance of medical preparation and that offer the student flexibility in educational options.

A necessary mission of the School is to prepare dental students to face a professional future in which many changes may be anticipated. Students completing the D.D.S. degree within the next years will enter a professional world in which traditional health care systems and the old values are still strong. They must be able to function successfully and contribute to some existing career role in that world, but it is equally important for today's students to recognize that during their active professional life span of approximately forty years, the health-care system, including dentistry, will change substantially.

Changes in the economics of dental health care may also be expected from scientific research aimed at reducing the prevalence of dental caries and other dental diseases. The need for well-trained dentists in this country will remain strong, however, as the growing population of elderly persons in the United States who require care will place a new set of demands on the dental care delivery system.

It is clear that future graduates in dentistry must be provided with an education that will permit them to adapt to a changing way of life and a changing demography. The new dentist must have the commitment, the capacity, and the ability to continue to learn during a long and constantly changing professional lifetime. These are attitudes and skills that must be fostered in the dental educational process.

## THE STUDY OF DENTISTRY IN NEW YORK CITY

New York City offers an extremely advantageous setting for the study of dentistry. Many of the most talented dental professionals of the nation and of the world maintain practices in New York City, and there are opportunities for students to visit private offices, clinics, and hospital dental services located throughout the city. In addition, the professional dental resources of the city provide students with exposure to leading authorities in every field of dentistry, many of whom serve on the Faculty of the School.

At the same time, Columbia students have opportunities for an unusually wide choice of cultural and artistic activities for which New York City is well known. Museums, theatres, opera houses, concert halls, and cinemas provide almost unlimited entertainment possibilities. For those interested in pursuing educational courses in addition to dentistry, Columbia University and numerous other academic centers in the city offer many opportunities for extracurricular learning.



## THE MISSION OF COLUMBIA UNIVERSITY SCHOOL OF DENTAL AND ORAL SURGERY

Columbia University School of Dental and Oral Surgery (SDOS) was established in 1917, when the School became incorporated into Columbia University. The School's mission has evolved into a tripartite commitment to education, patient care, and research.

The mission of the School of Dental and Oral Surgery is to

- train general dentists, dental specialists, and dental assistants in a setting that emphasizes comprehensive dental care delivery and stimulates professional growth;
- inspire, support, and promote faculty, pre- and postdoctoral student and hospital resident participation in research to advance the professional knowledge base; and
- provide comprehensive dental care for the underserved community of northern Manhattan.

### Education Goals

The curriculum strives to prepare graduates who, in addition to becoming competent general dentists and dental specialists, are able to provide comprehensive care to all, including medically complex patients, and are prepared to function as integral members of a health care team. This is achieved by virtue of a strong foundation in the biomedical sciences as well as a curricular emphasis on the social, economic, and ethical aspects of the profession. The School is committed to providing its students with a rich and diverse clinical education experience, by improving the oral health of and bringing clinical services to underserved and minority patients of northern Manhattan. SDOS provides an academic environment that encourages students to take advantage of the educational opportunities that the University offers in such diverse areas as public health, informatics, and biomedical research, thereby enriching the education of those who will enter the practice of dentistry and the dental specialties.

The education goals of the School of Dental and Oral Surgery are to

- prepare students to become competent in general dentistry;
- prepare students for careers in dentistry with a strong emphasis in the biomedical sciences;
- prepare students with an understanding of the social, economic, and ethical aspects of the profession, as well as the historical foundations of dentistry; and

- support and strengthen advanced dental education programs in general dentistry, the dental specialties, and the dental sciences.

### Research Goals

Research is the mechanism by which we expand our existing knowledge base. Dentistry has always been, and continues to be, an evolving health care discipline whose foundations are based on research. SDOS is committed to inspire and support future dental educators who are committed to research as part of their professional lives; to foster and promote faculty, pre- and postdoctoral student and hospital resident participation in research; and to train students and residents in research methodology. This training will allow the future generations of practitioners to interpret new research findings in the literature and, when possible, to incorporate this information into the clinical practice of dentistry.

The research goals of the School of Dental and Oral Surgery are to

- encourage and support all forms of academic research;
- promote collaborative research activities between faculty at the School and faculty in the Health Sciences and the University;
- promote pre- and postdoctoral students' research training; and
- develop dental educators committed to research as part of their professional lives.

### Patient Care Goals

The School is the largest primary and specialty oral health care provider in the northern Manhattan communities of Harlem and Washington Heights/Inwood. Both communities have been designated dental health professional manpower shortage areas by the Department of Health and Human Services' Bureau of Primary Care. Patient care is a primary School mission and the School strives to meet the needs of these underserved communities.

The patient care goals of the School of Dental and Oral Surgery are to

- view patient care as a primary School commitment and to deliver comprehensive and quality care while providing a rich diverse clinical education experience to students; and
- bring clinical services to a wide range of underserved and minority patients in northern Manhattan.

# Curriculum and Programs of Study

## INTRODUCTION

Many departments of the University contribute to and collaborate in the education of dental and postdoctoral students, assuring them a broad foundation for sound professional development. The guiding educational policy of Columbia University is the pursuit of excellence, and the primary goal of the School of Dental and Oral Surgery is the preparation of graduates equipped to fulfill their obligations to the individual, to society, and to the profession.

The School, recognizing the need for greater emphasis on the prevention of dental disease, constantly strives to revise the academic program. The curriculum is designed to increase a student's appreciation for the conceptual basis of dentistry. Adequate preparation for the demands of dentistry requires an understanding of broad biological principles integrated with a continually evolving body of scientific information in clinical dentistry and basic dental research. Predoctoral students, as directed observers, are exposed to a full spectrum of dental problems. They are then introduced to surgical and manipulative procedures as well as to methods of diagnosis and the prevention of disease. Emphasis is on the close relationship between health and disease, both systemic and oral; on diseases of the face and mouth that may affect other organ systems; and on oral health as an essential component in total health.

Clinical training is broad in scope. It is designed to produce competence in the recognition of oral disease and disorders, stress the essential role of prevention in the control of oral disease, establish the concept of maintaining oral structures in optimal health, and develop skills in the planning and rendering of treatment.

The approach to clinical training is innovative and effective. Rather than a standardized clinical experience, a modular system permits the student to work at his/her own pace, taking the time needed to master a particular technique before moving on. The School has adapted the mentor model, so that students work side by side with a faculty member who is there to demonstrate techniques, serve as a preceptor, and provide individual instruction. The transition from the laboratory to patient care is made more effective and easier by the clinical simulation laboratory, a dental operator area with manikins.

A curriculum must be considered as only the initial framework for a student's lifetime participation in the profession of dentistry. To this end, the curriculum cultivates in students habits of independent thought and scholarship and encourages the continual evaluation of new knowledge. Attainment of professional competence and future development are encouraged by fostering the spirit of inquiry, and the School stresses the application of scientific methods and student participation in research.

Knowledge of the processes of human growth and development and of the prevention of disease and abnormality has resulted in an extensive reduction in infant and child mortality, and in a marked increase in the life span of the individual. In dentistry, prevention of dental and oral disease provides an opportunity for children to reach adulthood with complete, healthy dentitions. The in-

creased life span of Americans, on the other hand, presents many physiological, pathological, and psychological problems that are peculiar to the aged and must be considered when rendering dental treatment to elderly patients. The School has therefore developed a comprehensive program to train students in geriatric dentistry. Individuals with medical, neurological, and other handicaps also present special problems, and they have been able to receive dental treatment since the establishment of special facilities in the School, such as the Treatment of the Handicapped Clinic.

The University recognizes that accomplishing the objectives of its dental education program requires the selection of students with superior abilities and academic qualifications, the acquisition and maintenance of an excellent staff, and the constant pursuit of knowledge through an active and diversified educational and research program. Conscious of these needs, the School selects its students with care and maintains classes with a favorable ratio of staff to students that permits individual instruction and a stimulating relationship between student and instructor. Through the years the School has had a distinguished staff that has demonstrated accomplishment in educational research and professional leadership, and continues to prepare students for the expanding professional responsibilities of dentistry and the prevention of dental disease.

## PROGRAMS OF STUDY

The School of Dental and Oral Surgery offers the following educational programs:

### Predocctoral Programs

#### *D.D.S. Program*

This is a **four-year program** leading to the **D.D.S. degree**. The degree requirements include the completion of the full four-year curriculum and the successful completion of all D.D.S. degree courses (5000 through 8000 level) that are listed in the School bulletin. Financial aid is available for all eligible students in the form of scholarships and loans.

Annually, applicants are reviewed for admission with **advanced standing**. The applicants are dentists who have completed their dental education in a university outside the United States. When admitted, these students join the second-year class in the spring semester and complete all requirements for that semester and for the third and fourth years of the curriculum.

#### *Combined Program with the Mailman School of Public Health*

The D.D.S. degree program may be **combined** with an **M.P.H. degree** program. Admission to the double degree program requires acceptance first by the School of Dental and Oral Surgery, with subsequent application and admission to the School of Public Health. Admission standards for the M.P.H. component of the combined program are set by the Faculty of Public Health. Each degree is awarded independently when the respective requirements have been met. An early commitment is advisable. However, students can enter the program at any time during the first

two and a half years and have up to two years after dental school graduation to complete the requirements (which include 35 credits) for the M.P.H. degree. Several members of the Dental Faculty hold joint appointments in Public Health.

They monitor and supervise the admission and academic progress of the dual degree students. During the periods when students are registered in the Mailman School of Public Health, they become eligible for financial aid in that school.

The program is designed for students who have the skills of dentistry as well as those of public health. In addition to a foundation in the basic biological sciences and clinical dentistry, students will gain broad insight into the complexities of the evolving health-care system in the United States and develop the skills required for them to assume roles as implementers and leaders within that system. Depending on the chosen area of public health concentration, students may develop special competence in epidemiology, biostatistics, health administration, the sociomedical sciences, and other areas of special interest.

The joint degree program is a major step in the education of interdisciplinary professionals who can be effective as practitioners and interpreters at the interface between dentistry, other health disciplines, and the health system. Graduates of the program are serving currently in administrative posts, the Public Health Service, general practice residencies, specialty residencies, the armed services, and private practice.

For further information, consult Dr. Burton Edelstein, Director, Division of Community Health, School of Dental and Oral Surgery, 630 West 168th Street, New York, NY 10032; telephone: (212) 304-7177.

#### ***Combined Program with the Graduate School of Business***

The D.D.S. degree program may also be combined with an M.B.A. degree program. Students must apply separately to, and be admitted by, both schools. Admission to the Business School may occur as early as the fall term of the first year or as late as the spring term of the third year of enrollment in the School of Dental and Oral Surgery. Admission standards for the M.B.A. component of the combined program are set by the Faculty of the Graduate School of Business. Enrollment in the M.B.A. program requires a student to interrupt his/her dental study for three terms (minimally a full calendar year). The total duration of the program is therefore at least five years. Degree requirements for the M.B.A. degree include 45 credit points, and students must complete fifteen business courses. During the terms when the students in the combined degree program are registered in the Business School, they become eligible for financial aid in that school. The need for individuals with dual training is felt strongly in the dental profession. The increasing complexity of dental health care delivery will be served best by individuals who are not only professionally trained managers, but who also understand the basic conditions for ethical and responsible dental health care. Employment opportunities are expected to undergo rapid expansion for the foreseeable future.

For further information, consult Dr. Martin Davis, Associate Dean for Student and Alumni Affairs; telephone: (212) 305-3890; e-mail: mjd2@columbia.edu.

#### **Postdoctoral Programs**

##### ***M.S. Degree Programs in Periodontics and in Prosthodontics***

The School offers two three-year postdoctoral programs leading to the M.S. degree in Periodontics and in Prosthodontics. Applicants for the Prosthodontics program must apply through a matching process. The Periodontics program does not participate in a matching program.

The degree requirements include the completion of the full three-year curriculum and the successful completion of all courses (9000 level) that are listed for the program. Financial aid programs are in place.

##### ***Certificate Programs in Endodontics and Orthodontics***

The School offers two two-year postdoctoral programs leading to a Certificate of Training in Endodontics and Orthodontics. Applicants for the Orthodontics program must apply through a matching process. Endodontics applicants do not participate in a matching program. The requirements for the certificate include the completion of the full two-year curriculum and the successful completion of all courses (9000 level) that are listed for the program. Financial aid programs are in place.

##### ***Certificate Programs in Advanced Education in General Dentistry***

The requirements for the certificate include the completion of the one-year curriculum and successful completion of all courses (9000 level) that are listed for the program. Fellowship stipends are available.

##### ***Combined Program with the Graduate School of Arts and Sciences***

The three postdoctoral certificate programs (but not the M.S. degree programs) may be combined with an optional one-year extension for an M.A. degree program in Dental Sciences. The applicants for the combined program must meet additional admission standards for the Graduate School, including Graduate Record Examination (GRE) test scores. Degree requirements include 30 credits, the completion of a project of original research, and the submission of an acceptable thesis. Limited financial aid is available for students in this combined program.

The program is primarily intended for those clinical trainees whose career goals include participation in academic teaching programs and institutional research programs. Because there is interaction between the program and clinical training, students become highly trained dental specialists, capable of incorporating new biological concepts in treatment, as well as dental investigators. The two kinds of training are combined and spread over a thirty- to thirty-six-month period. Students receiving training at certain affiliated hospitals may be eligible for admission, based on the recommendation of the director of the

relevant clinical program at Columbia. All graduate work and research must be done at the University.

Students are expected to indicate a specific area of research specialization when they apply for admission or during the first term. Based on this selection, an appropriate faculty committee will, with the student's participation, map out the academic program. Of the 30 required graduate credits, approximately one-third consist of courses required of all students and one-third of thesis-related courses. The remaining one-third consist of original laboratory or clinical research, under the supervision of an appropriate member of the faculty, and thesis preparation. The research segment of the training is expected to extend over a three-term period at least.

Admission is limited to students who have completed dental training and who have a strong background in the basic sciences. Applicants must submit the test results of the GRE. Applicants may be asked to visit for an interview by faculty members. The program is highly selective, and therefore only a few students can be admitted each year.

Because the purpose of this program is research training of clinical specialists, students must maintain satisfactory performance in their clinical training as well as in their graduate studies. While each program has its own set of requirements, the structures are interrelated. Both must be completed at the same time, and in no event will the M.A. degree be granted separately.

### **Hospital-Based Residency Programs**

Faculty of the School of Dental and Oral Surgery are responsible for a number of hospital-based residency programs that are listed below. For additional information regarding these programs, consult Dr. Sidney Eisig, Director of Oral and Maxillofacial Surgery and Chief of the Hospital Dental Service; telephone: (212) 305-7626; e-mail: sbe2002@columbia.edu.

#### ***Six-Year Program Leading to a Certificate in Oral and Maxillofacial Surgery and an M.D. Degree***

Applicants must be licensed to practice in New York State and they must apply through a matching process. They also must meet the requirements for admission as advanced standing students in the College of Physicians and Surgeons, where they will be enrolled during the second, third, and fourth years of the M.D. degree program. In addition to serving as OMFS residents, the students in this program also complete a one-year residency in general surgery. The remainder of the program is composed of hospital-based residencies with stipends attached.

#### ***Two One-Year Advanced Education in General Dentistry Programs and One General Practice Residency Program***

All three of these programs lead to a certificate of training. The requirements for the certificate include the completion of the full one-year curriculum and the successful completion of the requirements for the programs. These General Dentistry programs are hospital-based residencies with stipends attached.

#### ***Two-Year Residency in Pediatric Dentistry Leading to a Certificate of Training***

Admission standards and educational requirements are similar to those in the other postdoctoral programs that provide specialty training. The applicants must apply through a matching process. This is a hospital-based residency program with stipend attached.

### **Certificate Program in Dental Assisting**

The School offers a **one-year program leading to a Certificate of Training in Dental Assisting**. Admission standards include a high school or GED diploma, ability to pass the "test of adult basic education" at the twelfth grade level, and an interview. The requirements for the certificate include the completion of the one-year curriculum and the successful completion of all courses (greater than 1000 level) that are listed for the program. This is a tuition-free program. Full financial support is available for all students enrolled.

### **Additional Graduate Programs**

#### ***M.A. Degree in Dental Informatics***

Through one of the members of the dental faculty, a **three-year postdoctoral M.A. fellowship program in Dental Informatics** is available for qualified individuals. Admission standards are similar to those in other postdoctoral programs. The requirements for the degree include successful completion of a core course program in medical informatics, as well as courses in related disciplines (computer science, biostatistics, and physiology). Financial aid is available in the form of a stipend and tuition support.

Consult Dr. John Zimmerman (jlz4@columbia.edu) for information.

#### ***Courses Leading to the Degree of Doctor of Philosophy***

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable pre-dental college years is considered by the Graduate School of Arts and Sciences of Columbia University to meet the general requirements for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate School as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of points toward the fulfillment of the residence requirement for the academic degree. For further information, see the bulletin of the Graduate School of Arts and Sciences, which can be obtained by writing to: Office of Student Affairs, Graduate School of Arts and Sciences, Columbia University, 107 Low Memorial Library (MC 4304), 535 West 116th Street, New York, NY 10027.

### **Continuing Education**

Consistent with the belief that a lifetime of learning is necessary for continued competence in the health profes-



sions and that dental education must be a continuum that extends throughout one's professional career, the School of Dental and Oral Surgery maintains a program of continuing education conferences and courses of varying lengths on diverse subjects. They are given throughout the academic year and are announced by special brochures, notices in journals, and special mailings.

Courses may range in length from one day to one week or may meet weekly for an entire term. They are designed to enable the practitioner to review and continue his or her educational experience in fields where research and its clinical application present constantly changing concepts of prevention, diagnosis, and treatment.

A number of courses among those described under *The D.D.S. Program and Postdoctoral Programs in General Dentistry and the Dental Specialties* are offered as Continuing Education courses. These courses are available for attendance by nonmatriculated practitioners and other professionals through the Office of Continuing Education and are described in periodic Continuing Education brochures and announcements.

#### **Special Courses for Foreign Dentists and Visiting Scholars**

Qualified exchange students are offered the opportunity for guided study, attendance, and observation of clinical and classroom education under the direction of a faculty member for variable periods of the school year not necessarily corresponding to regular academic intervals. Faculty members of other institutions may be granted visiting scholar privileges, which include auditing clinic and classroom courses (as approved by the course instructor), attending lectures, and participating (with the approval of the appropriate faculty member) in seminars.

This program is offered without credit. A special fee is determined after consultation with the director of Continuing Education, depending on the courses to be attended and the length of time to be spent in attendance. No official records of attendance are kept, and no transcript certifying attendance or work undertaken is provided by the registrar. Arrangements for enrollment are made with the director of Continuing Education.

# Teaching and Support Facilities

## TEACHING FACILITIES

### Lecture/Seminar Rooms and Laboratories

The schools on the Health Sciences campus share twenty-three small teaching rooms, some of which can be converted to wet lab/demonstration rooms. In addition there are four modern rooms with advanced AV technology and network connections and a larger seating capacity—300 (two) and 163 and 66. There are also three microscopy laboratories with advanced AV technology and network connections and a seating capacity of 48 (two) and 60 students. Traditional, well-equipped anatomical dissection laboratories (for 150 and 76 students, respectively) serve the medical and dental classes.

There is a 38-workstation computer classroom. Finally, there are two older amphitheatres (seating capacity 100–150), one auditorium (120) and a 160-seat conference room in the Russ Berrie Medical Science Pavilion.

### Dental (preclinical) Laboratory Teaching Facilities

Within the past decade the School has completely renovated and equipped its dental teaching laboratories.

#### Preclinical Laboratory

This simulation laboratory has 76 workstations and is equipped with advanced multimedia teaching technology. The laboratory is used extensively by classes in the first, second, and third years of the predoctoral program, as well as by the program in dental assisting.

As an adjunct to preclinical teaching in operative dentistry, the School recently installed a DentSim unit, on which selected projects are taught.

#### Orthodontics Laboratory

This laboratory serves the specialty program in orthodontics and is used intensely during the early months of the program.

#### Prosthodontics Laboratory

This state-of-the-art laboratory serves the specialty program in prosthodontics. It was constructed in 1999–2000.

### Clinical Facilities

The on-site clinical facilities of the School are located on the seventh, eighth, and ninth floors of the Vanderbilt Clinic. The seventh and eighth floors, which are used mainly for predoctoral instruction, have been renovated in the past decade. The ninth floor, which houses the clinical facilities for the postdoctoral programs in endodontics, orthodontics, periodontics, and prosthodontics, has seen the completion of the second stage of a three-stage renovation process. The clinical facilities comprise 145 dental units and 8 intra-oral and 2 panoramic x-ray units, and are well equipped for quality clinical instruction.

The School has initiated a collaborative project to design and manufacture a chairside computer display and input device for the dental operator (Columbia Digital Chair). The dental operator functions like a hospital bedside terminal in that information from several different systems (registration, billing, laboratory, radiology, pathology, etc.) is often required in the delivery of patient care. This system has been introduced in some of the postdoctoral specialty programs.

The School's off-site facilities (the clinics of the Dent-Care network, as well as the dental service clinics in the School's affiliated hospitals) currently play an important role in predoctoral, postdoctoral, and dental assisting programs. Their utilization will be further expanded in the near future, thereby enhancing the clinical experience of the students in a number of different clinical settings.

## SUPPORT FACILITIES

### Registrar's Office

141 Black Building  
(212) 305-3992  
Fax: (212) 305-1590  
E-mail: sashs@columbia.edu

In addition to registration and recordkeeping, the Registrar's Office, together with academic departments and schools, reviews students' progress toward the completion of their degrees and certificates; posts degrees, honors, and grades to students' records; processes requests for academic transcripts and certifications; and orders and distributes diplomas.

The Registrar's Office increasingly makes its services available electronically, eliminating where possible the need for students to conduct in-person transactions. The Registrar's Office has direct working relationships with state and federal agencies as well as with accreditation agencies and provides information and consultation to other University offices that work with these same agencies.

### Augustus C. Long Health Sciences Library

The Augustus C. Long Health Sciences Library is located in the Hammer Health Sciences Center, 701 West 168th Street. The library serves the schools of medicine, dentistry, nursing, and public health, and other health care, instructional, and research programs at the NewYork-Presbyterian Hospital.

The Health Sciences Library is one of the largest academic medical libraries in the country. Its collection includes approximately 500,000 volumes, over 4,400 currently received periodicals, and a large collection of audiovisual material. Also included in the library's collection are the resources of Archives and Special Collections, consisting of rare and unique materials that document the history of medicine and medical education at the Columbia Presbyterian Medical Center. Among these are the Florence Nightingale Collection, the Sigmund Freud Library, and the Jerome P. Webster Library of Plastic Surgery. The library supports a growing number of electronic resources available through the CPMC network.

and also via the library's Web site on CPMC net. These include databases such as MEDLINE, electronic journals and full texts, and links to health science resources on the Internet.

The library offers a wide array of services including instruction in using library and electronic resources, individual consultation on research topics, reserve readings, interlibrary borrowing, and a fax service. The library also houses a full-service Photocopy Center, offering self-service photocopy machines, article retrieval and photocopy service, high-volume photocopying, and color copying service.

The Health Sciences Library's home page at <http://cpmcnet.columbia.edu/library/> has a complete description of hours, services, and resources. Users can also e-mail queries to [hslibrary@columbia.edu](mailto:hslibrary@columbia.edu).

Students and faculty at the Health Sciences campus are entitled to privileges at any of the Columbia University Libraries. The main collection is housed in Butler Library on the Morningside campus; special and departmental collections are housed in other buildings on the campus. A complete guide to the University Libraries is available online at <http://www.columbia.edu/cu/lweb/>.

#### Center for Academic Information Technology

The Center for Academic Information Technology

CAIT, provides computer services and resources to support education and research at the Health Sciences campus, including computer labs and classrooms, development and delivery of online curriculum and multimedia, assistance in connecting to and using the campus network, computer support for the Health Sciences Library, and development and administration of CPMCnet, the primary

Internet and World Wide Web server and gateway of the Columbia Presbyterian Medical Center (<http://cpmcnet.columbia.edu>).

The Center's primary service location is on the second floor of the Health Sciences Library. Computer labs maintained by CAIT are located there, as well as in the Student Learning Center (Presbyterian Hospital Building, seventeenth floor), and in a room adjacent to the lobby of the Hammer Building that is open 24 hours. A wide range of general applications, such as word processing, presentation graphics, and statistical analysis, are supported on Windows and Macintosh computers in the labs. The Center also provides access to printing, electronic mail, and campus-wide network resources. Assistance with viruses, damaged files, and file conversion/transfer is provided at the Center's service desk. An extensive workshop program provides hands-on training in computer applications, electronic mail, and Internet navigation. Further information is available at the service desk or online (<http://cpmcnet.columbia.edu/computers/cait>).

#### Center for Curriculum Evaluation and Faculty Support

The Center for Curriculum Evaluation and Faculty Support assists course directors and faculty in the development and implementation of strong and innovative educational programs. Ongoing feedback from students about the courses, lectures, and educational materials that make up the curriculum is a valuable component in efforts to ensure that programs are of the highest quality. Throughout the year, students may be asked to complete evaluation surveys, participate in formal discussion sessions to assess various aspects of the curriculum, and/or







review new materials to support the curriculum. Student comments and suggestions are solicited regularly and are greatly appreciated.

In addition, the Center for Curriculum Evaluation and Faculty Support operates a Test and Survey Scanning Service. Available for both faculty use and student projects, the facility is located on the main floor of the Health

Sciences Library. The service provides scanning of National Computer System (NCS) bubble-sheet forms for course examinations, course evaluation surveys, and research surveys. Basic statistical and summary reports on scanned data are supplied and the scanned data also are available in flat ASCII files. A handbook of policies and procedures is available at the facility.

# The D.D.S. Program

## ADMISSION REQUIREMENTS

Candidates may apply after July 1 during the academic year preceding that for which they seek admission. The deadline for receipt of applications is February 15; however, students should be aware that interview and subsequent acceptance is carried out on a rolling basis. Application is made through the American Association of Dental Schools Application Service (AADSAS). Application forms for this service can be obtained directly from the American Dental Education Association (ADEA), 1619 Massachusetts Avenue N.W., Washington, DC 20036, or by calling (800) 353-2237. Columbia University School of Dental and Oral Surgery does not have a supplemental application. Applications will be reviewed in the order they are completed.

Upon submission of the AADSAS application, candidates are instructed to follow the specific guidelines for *Columbia University*, which are provided with the AADSAS application. All required materials are to be mailed to: Admissions Office, Columbia University School of Dental and Oral Surgery, 630 West 168th Street, New York, NY 10032.

**Application Fee:** The applicant must send a check or money order made payable to Columbia University in the amount indicated in the AADSAS guidelines for Columbia. (Please note: we cannot accept Canadian postal money orders.) This fee, which covers the cost of processing the application, is required of all prospective students. Those wishing to be considered for a fee waiver must supply, from their current financial aid officer, the financial documentation necessary to support the waiver request. The application fee is not refundable and is not credited toward tuition.

**Dental Admission Tests:** All applicants must take the Dental Admission Test, which is offered on computer. Applicants are required to supply an official copy of scores to the Admissions Office. A copy of the applicant's own report of scores will not satisfy the requirement. For test and registration information, applicants should contact the Department of Testing Services, 211 East Chicago Avenue, Chicago, IL 60611; (312) 440-2689; or go to <http://www.adca.org>.

**Required Academic Preparation:** Application to the School of Dental and Oral Surgery requires a minimum of three years, or 90 credits, at an accredited American institution or its equivalent. Such preparation must include the following courses: physics, biology, inorganic (general) chemistry, and organic chemistry, all with laboratory (8 points each); English composition or literature (6 points). It is not necessary to complete the academic requirements before applying, but applicants are *strongly advised* to complete all biology and chemistry requirements prior to applying. All requirements must be completed to the admissions committee's satisfaction before registration, as verified by official transcript.

**Recommended Preparation:** Additional courses in biochemistry and chemistry, advanced courses in biology,

courses in mathematics, foreign languages, sociology, history, and the fine and industrial arts are all recommended. The admission of a student depends on academic preparation and intellectual capacity, as well as on judgment of the student's character.

**Letters of Recommendation:** Applicants to the D.D.S. program are required to provide three **confidential** letters of recommendation from science professors, or one composite letter from a pre-health committee. Letters of recommendation from nonscience professors or employers are accepted but *will not satisfy the requirement*.

**Transcripts:** Applicants are required to provide transcripts for all academic coursework.

**Interviews:** A personal interview is required for admission. The interview is by invitation only from the Committee on Admissions. Interviews will give candidates an opportunity to discuss noncognitive indicators such as community service, work experience, leadership activities, and knowledge of the profession. It will also provide the interviewer an opportunity to assess maturity of expression, English language skills, and other personal qualities. Candidates who are chosen for an interview will be notified by mail.

**Acceptance Fee:** After receiving notice of acceptance, the applicant must notify the Committee on Admissions whether he or she intends to enroll according to instructions specified in the letter of acceptance. The non-refundable acceptance fee of \$1,000 is applied to the applicant's tuition upon registration in the class to which he or she has been admitted. In addition, a secondary nonrefundable deposit of \$500 is required to hold a student's seat in the class. By virtue of enrollment in the School of Dental and Oral Surgery, all students agree to abide by the Code of Conduct.

## COMBINED PROGRAMS

**With Barnard College.** Under the "professional option" plan, selected students from Barnard College may receive the Bachelor of Arts degree from Barnard after the completion of three years of undergraduate work at Barnard and the first year in the School of Dental and Oral Surgery. To be eligible for this program, before entering the School the student must have completed 90 points of academic work at Barnard College and all of the prerequisite courses for the Dental School. To be eligible for the Bachelor of Arts degree, she must have completed 120 points, 30 of which may be earned at the Dental School, and she must have completed all of the general and major requirements of Barnard College.

**With the School of General Studies.** A limited number of highly qualified students may participate in a professional option program with the School of General Studies that reduces the usual time of study for the D.D.S. degree from eight to seven years. Professional option may be exercised after completion of 94 points, including at least 90 points of liberal arts subjects (including all courses required for the B.S./B.A. degree), and not less than 60 points of which must have been taken at Columbia University. (Courses taken at a Columbia graduate school count toward the 60 points.) The aim of this joint program is to offer a course of study by which students may reduce the

time of preprofessional and professional preparation for dentistry as a means of providing earlier access to practice opportunities or postgraduate training.

**With Queens College.** The B.A./D.D.S. Pathway is an Early Assurance Pathway through which a small number of students receive tentative admission to Columbia University School of Dental and Oral Surgery at the completion of the Pathway requirements as well as to additional credits of coursework at Queens College. Successful completion of the B.A./D.D.S. requirements and 120 credits leading to a baccalaureate degree in the time specified will assure admission into Columbia University School of Dental and Oral Surgery. The B.A./D.D.S. is rigorous and demanding, and students will need to apply their full efforts. Interested students should contact Queens College at (718) 997-4580.

Admission to the program and contingent early acceptance into the Dental School are based on the applicant's motivation to enter the field of dentistry, scholastic ability, and personal attributes. Early identification of candidates permits assignment to summer work-study programs in laboratories of the School of Dental and Oral Surgery and elsewhere on the Health Sciences campus. Part of the work-study experience consists of professional tutorials with selected faculty members as preparation for basic biological sciences and provides the student with an introduction to techniques of scientific problem solving. Final acceptance into the School of Dental and Oral Surgery is conditional upon satisfactory completion of a minimum of two years with the School of General Studies under the professional option, including all courses that are prerequisite to the study of dentistry as well as satisfactory performance on the DAT. For further information, students should consult with the Office of Admissions, School of General Studies, 509 Lewisohn, on the Morningside campus.

## ADMISSION WITH ADVANCED STANDING

Graduates of foreign dental schools who apply for admission with advanced standing are considered for placement into the mid-second year of the D.D.S. program. The program of study is anticipated to last two and one-half years, pending satisfactory performance as determined by the Class Committees. Acceptance is based on prior academic record and applications must include notarized translations/evaluation as well as official results of the National Board Exam, Part I, and the Test of English as a Foreign Language (TOEFL). A minimum TOEFL score of 600 is required. Applications for admission are accepted between May 15 and June 30 *only*, for January enrollment. Upon review of a completed application, personal interviews are given at the request of the Committee on Advanced Standing. Applicants invited for interview are subject to a mandatory bench exam to be administered by the School. A nonrefundable \$100 application fee is required of all applicants.

Contact the Chair of the Advanced Standing Committee, (212) 305-3573, for an official application form.

## TRANSFER ADMISSIONS

The School of Dental and Oral Surgery considers applications for transfer into the first or second year on an

individual basis. Space availability, curricular similarities, and educational background are taken into consideration when reviewing applications. All decisions are made at the discretion of the academic dean and are final.

Contact the Office of Admissions for an official application form and list of required materials.

## SUMMARY OF THE D.D.S. PROGRAM

### First Year

*\* Biomedical sciences are in bold type*

INTC D5001 081	Introduction to dentistry
INTC 5010 081, D5011 081	Sciences basic to the practice of dentistry
INTC D5015 081	Epidemiology
NUTR D5101 081	Nutrition
ANAT D5102 081	Human clinical anatomy
ANAT D5103 081	Human development
BHSC D5104 081	Health promotion
ANPH D5105 081	Neural science
OFGD D5361 081	Oral histology, growth and development
OPDN D5450 081	Dental anatomy and occlusion
OPDN D5452 081	Dental anatomy technique
PROS D5800 081	Prosthodontics technique
PROS D5820 081	Introduction to prosthodontics
BHSC D5855 081	Professionalism in dentistry

### Second Year

*\* Biomedical sciences are in bold type*

INTC D6052 082	Cariology
MICR D6101 082	General microbiology
PHAR D6102 082	General and special pharmacology
PATH D6103 082	Molecular and cellular pathology
IMMU D6105 082	Immunology
OPDN D6301 082	Introduction to operative dentistry
OPDN D6305 082	Preclinical operative technique
PATH D6371 082	Oral pathology
ORSG D6401 082	Local anesthesia
ORSG D6403 082	Introduction to oral and maxillofacial surgery
INTC D6405 082	Pathophysiology
ORSG D6500 082	Physical diagnosis
PDNT D6702 082	Principles of periodontics
PDNT D6710 082	Workshop and clinical practice in periodontics
PROS D6800 082	Preclinical prosthodontics technique
PROS D6820 082	Basic prosthodontics
BHSC D6851 082	Introduction to the patient
RADI D6902 082	Oral radiology

### Third Year

INTC D7001 083	Area of concentration
INTC D7010 083	Introduction to clinical practice

INTC D7011 083	Basic diagnosis and treatment planning
COMH D7104 083	Oral health care delivery
DAUT D7151 083	Practice management
BHSC D7160 083	Ethics
ENDO D7201 083	Endodontic theory and technique
OPDN D7304 083	Operative dentistry
OPDN D7305 083	Preclinical operative technique
OPDN D7308 083	Clinical restorative dentistry
OPDN D7340 083	Esthetic dentistry
ORSG D7402 083	Basic oral and maxillofacial surgery
ORSG D7412 083	Pain and anxiety control
ORSG D7500 083	CPR/medical emergencies
ORTH D7502 083	Principles of orthodontics
ORSG D7505 083	Physical diagnosis clerkship
PEDI D7656 083	Preclinical pediatric dentistry technique
PDNT D7702 083	Clinical practice of periodontics
PEDI D7710 083	Theory of pediatric dentistry
PROS D7810 083	Advanced preclinical prosthodontics technique
PROS D7815 083	Intermediate prosthodontics
PROS D7820 083	Dental implantology
PROS D7831 083	Dental materials
BHSC D7851 083	Dental interviewing
ORSG D7865 083	Infection control
INTC D7900 083	Spanish
STOM D7912 083	Clinical oral pathology and medicine
STOM D7913 083	Facial pain
RADI D7932 083	Oral radiology

#### Fourth Year

OPDN D8000 084	Senior interdisciplinary series
INTC D8001 084	Area of concentration
INTC D8011 084	Advanced diagnosis and treatment planning
ORSG D8011 084	Extramural hospital rotation
BHSC D8022 084	Gerontology/geriatric dentistry
ENDO D8202 084	Advanced clinical practice in endodontics
PEDI D8300 084	Child abuse recognition and reporting
OPDN D8302 084	Operative clinical exams
ORSG D8460 084	Clinical cancer training
PEDI D8651 084	Practice of pediatric dentistry
PDNT D8710 084	Advanced clinical practice of periodontics
ORTH D8800 084	Clinical practice of orthodontics
PROS D8802 084	Prosthodontics clinical exams
PROS D8804 084	Advanced restorative clinical practice
PROS D8830 084	Selection of dental materials
RADI D8931 084	Oral radiology clinic

#### Required Summer Clinics

These sessions are held in June and August of the summer between years two and three and years three and four. A fourth-year clinical summer extension (M0004) may be required for students who fail to meet all their educational requirements in a timely manner for graduation.

#### COURSES OF INSTRUCTION

The School offers basic science courses to combined classes of dental, medical, and graduate students in the form of a "core" program. During the **first year**, the dental student takes primarily a series of basic science courses, including the newly developed course, *Sciences basic to practice of dentistry*. This offering integrates material previously found in the courses *Biochemistry*, *Cell biology of tissues and organs*, *Human genetics*, and *Human physiology*. Other courses that deal with normal human biology are *Human clinical anatomy*, *Human development*, and *Neural science*, as well as *Epidemiology*, *Introduction to dentistry*, *Dental anatomy and occlusion*, *Oral histology*, *growth and development*, and *Health promotion*.

The **second year** deals primarily with abnormal human biology. The principal basic science series is a fully coordinated grouping of pathology, applied pathophysiology, and pharmacology. These basic science courses are bridged into clinical dentistry with *Physical diagnosis*, which has both didactic and clinical components. *Cariology*, *Principles of periodontics*, *Oral radiology*, *Introduction to the patient*, and the entire array of preclinical dental sciences complete the second year.

The **third year** is predominantly clinical, with training in all phases of dentistry. Students are assigned to small group practices in which they begin to practice clinical dentistry under close preceptor supervision, working alongside postdoctoral fellows who are treating more complex problems. Didactic courses in restorative dentistry utilize a case-based approach.

A highlight of the third year is the one-month rotation that all students spend off campus at an affiliated hospital. This extramural month is devoted to reinforcing skills in physical evaluation and diagnosis and in gaining experience in hospital oral and maxillofacial surgery clinics. One hundred twenty hours of curriculum time is available for students to devote to the area of concentration "track" that has been selected (see below).

The **fourth year** remains the major clinical dentistry year. While students complete studies in their chosen area of concentration track, they also assume responsibility for rendering comprehensive dental care to a practice panel of patients assigned to them. A unique feature of this year is the one-day-per-week general practice rotation taken with our faculty at one of our twenty-three affiliated hospitals. There the students have experiences with patient populations not available at our Vanderbilt Clinic site.

#### Area of Concentration Program

In order to broaden the experience of students planning careers in general dentistry, the School has developed a comprehensive program, the "Area of Concentration," which each student must take. Students select a series of educational offerings during the second year of the curricu-



lum. The program offers in-depth educational experiences in areas not ordinarily covered in the regular curriculum. On entering the Area of Concentration Program, the student selects one of five general categories—Advanced Clinical Dentistry, Research, Comprehensive General Dentistry, Oral Medicine/Oral Pathology, or Hospital Dentistry. The specialized tracks within these categories include, among other programs, periodontics, prosthodontics, pediatric dentistry, behavioral science, practice management, oral radiology, and geriatric dentistry. The faculty is prepared to assist students in developing an area of concentration around their individual interests. In past years tracks have been developed in veterinary dentistry, dental management of the hearing impaired, dental illustrating, and dental management of patients with craniofacial anomalies.

Throughout the entire curriculum an effort is made to interrelate the different phases of dental learning by means of correlation seminars and clinics in which the various departments and divisions cooperate in discussions and demonstrations that treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his or her own training.

Voluntary participation in research projects of the student's choosing and in programs under the guidance of members of the faculty is earnestly encouraged. Members of the William Jarvie Society undertake individual and team projects under the direction of members of the faculty. Lectures on the principles and practice of research

are provided, and, in addition, students assist in the execution of studies being pursued by faculty members. A limited number of student research fellowships are available for summer work under the direction of the staff. The scope of student research includes critical reviews of the literature, clinical studies in the techniques of the various disciplines of dentistry, and the evaluation of newer therapeutic agents and dental materials. Work in the basic sciences is encouraged.

The following is a description of the same courses that are listed in the summary of the D.D.S. degree program. They are grouped under the academic units that are responsible for their contents.

The University reserves the right to withdraw or modify the courses of instruction or to change instructors as may be necessary.

### Basic Biomedical Courses

(Taught by members of the faculties of both the College of Physicians and Surgeons and the School of Dental and Oral Surgery)

#### INTC D5010, D5011 08L. Sciences basic to the practice of dentistry

*Professors Dickstein and Pon and interdepartmental associates. First year.*

Lectures, conferences, and laboratories integrating principles of biochemistry, molecular and cell biology, tissues and systems biology, human physiology, and genetics.

Lecture hours: 142



Lab hours: 66  
Conference/review hours: 26  
Examination hours: 24

#### **INTC D5015 081. Epidemiology**

*Professors Ahluwalia, Nickerson, and staff. First year.*

Lectures and conferences integrating principles of biostatistics and epidemiological issues in health care in general and dental care in particular.

Lecture hours: 14  
Conference/review hours: 9  
Examination hours: 5

#### **NUTR D5101 081. Nutrition**

*Professors Nickerson and L. Tepper, Ms. Karmally, and staff. First year.*

Lectures and conferences that provide an understanding of the principles of nutrition as part of overall health care. The focus of this course is applied nutrition, that is, the tools dentists need to translate biochemistry into assessing and advising their patients on their food intake.

Lecture hours: 7  
Conference/review hours: 2  
Examination hours: 1

#### **ANAT D5102 081. Human clinical anatomy**

*Professors Ambrose, April, Singh, Solimene, and staff. First year.*  
Individual performance of regional dissections of the body by each student is required. Lectures stress functional interpretation and correlation of developmental anatomy with gross anatomy.

Lecture hours: 42  
Laboratory hours: 121  
Examination hours: 6

#### **ANAT D5103 081. Human development**

*Dr. Rothman and staff. First year.*

Lectures on selected topics in human developmental biology.

Lecture hours: 22  
Examination hours: 6

#### **ANPH D5105 081. Neural science**

*Professors Goldberg, Martin, and staff. First year.*

Lectures, laboratories, and conferences that provide an integrated understanding of neurophysiology, neuroanatomy, neurochemistry, and behavior.

Lecture hours: 40  
Laboratory hours: 7  
Conference/review hours: 13  
Examination hours: 7

#### **MICR D6101 082. General microbiology**

*Professors Prince, C.S.H. Young, and staff.*

Covers the basic biochemical and physiological characteristics of pathogenic viruses and bacteria, their structure and modes of replication, and introduces the molecular mechanisms underlying pathogenesis. Followed by a more clinically oriented component on the mechanisms of infectious diseases.

Lecture hours: 54  
Conference/review hours: 4  
Examination hours: 6

#### **PHAR D6102 082. General and special pharmacology**

*Professor Wit and staff. Second year.*

Rigorous course featuring lectures and discussions dealing with the basic principles of pharmacology and with drugs used in dental and medical practice. A thorough understanding of the material presented adds interest to the student's future dental practice and helps the student to render a more effective service to patients.

Lecture hours: 80  
Conference/review hours: 10  
Examination hours: 12

**PATH D6103 082. Molecular and cellular pathology**  
*Professor Marcantonio and staff. Second year.*

A short course covering the fundamentals of pathobiology, including the basic principles and mechanisms of inflammation, repair, and neoplasia. The fourteen lecture hours cover apoptosis, acute and chronic inflammation, and mechanisms of neoplasia. A contemporary equivalent of "General Pathology" accompanied by a two-hour gross laboratory featuring pathologic specimens from the cardiovascular, pulmonary, renal, and hepatic systems.

Lecture hours: 14  
Lab hours: 2  
Conference/review hours: 2  
Examination hours: 3

**IMMU D6105 082. Immunology**

*Department of Medicine staff and Professor Dougari-Bagtzoglou. Second year.*

General principles of cellular and molecular mechanisms in immune responses are presented. Included are cell surface receptors, cytokines, signaling peptides, antigen presentation, and effector functions of T-cell, macrophages, mast cells, and granulocytes.

Lectures hours: 30  
Conference/review hours: 3  
Examination hours: 3

**INTC D6405 082. Pathophysiology**

*Professors S.J. Scrivani, Canfield, Lefkowitz, and interdepartmental associates. Second year.*

Lectures, conferences, laboratories, and small group sessions integrating principles of general pathology, systemic pathology, including oral pathology, and an introduction to the relationship of basic sciences to systemic diseases presented by the patient. Didactic presentations by P&S faculty are supplemented with dental preceptor group discussions using a case study format. The course is intended to stimulate discussions of medical and dental patient management.

Lecture hours: 148  
Laboratory hours: 6  
Small group session hours: 15  
Examination hours: 21

**Interdisciplinary Dental Courses**

Taught by members of the Interdisciplinary Division, or by members of more than one clinical division.

**INTC D5001 081. Introduction to dentistry**

*Professor Zimmerman and staff. First year.*

Lectures, discussions, self-paced computer tutorial, and computer-based searches intended to orient students to the profession they are entering; to introduce them to basic oral disease prevention methods, basic dental procedures, dentistry's role in the health-care system and society, and current controversies in dentistry; and to familiarize them with basic information-seeking skills.

Lecture hours: 10  
Examinations hours: 1

**OFGD D5361 081. Oral histology, growth and development**

*Professors Moss-Salentijn, Klyvert, and Yuan. First year.*

Lectures, laboratories, and conferences on the detailed microscopic anatomy and the development of dental and periodontal tissues and associated orofacial tissues and structures. The clinical significance of this information is emphasized throughout.

Lecture hours: 33  
Laboratory hours: 44  
Conference/review hours: 8  
Examination hours: 5

**INTC D6052 082. Cariology**

*Professor Albert and staff. Second year.*

Lectures on the etiology, histopathology, measurement, and prevention of caries with focus on epidemiological aspects and preventive techniques for improving host resistance, and special emphasis of fluorides. Transmission of oral infections and infection control are included.

Lecture hours: 22  
Examination hours: 22

**INTC D7001 083. Area of concentration**

*Staff. Third year.*

Lectures, seminars, library assignments, and, where applicable, individual mentoring or in-depth clinical experience in a selected track of the Area of Concentration Program. Hours: 120

**INTC D7010 083. Introduction to clinical practice**

*Professor Zubiaurre and interdisciplinary staff. Third year.*

Lectures and clinic demonstrations to acquaint the students with patient care protocols and infection control procedures. Includes an introduction to smoking cessation counseling and patient referral to smoking cessation clinic.

Lecture hours: 13  
Clinical demonstration hours: 11

**INTC D7011 083. Basic diagnosis and treatment planning**

*Professors How, Zubiaurre, and staff. Third year.*

Case-based seminars for third-year students review actual clinical cases to develop diagnostic skills and to set treatment goals and appropriate treatment sequencing.

Seminar hours: 42  
Small group session hours: 11  
Examination hours: 6

**OPDN D8000 084. Senior interdisciplinary series**

*Professor Evangelidis and staff. Fourth year.*

Lectures, literature review, and case presentations in all areas of dental practice with emphasis on the comprehensive care of dental patients. Jurisprudence as it affects dental practice is reviewed. Includes a series of sessions dealing with ethics in dentistry.

Lecture hours: 26  
Conference/review hours: 33  
Case presentation/student: 1  
Quizzes: 6

**INTC D8001 084. Area of concentration***Staff. Fourth year.*

Lectures, seminars, research, and, where applicable, clinical experience in a continuation and extension of the selected track of the Area of Concentration Program.

Hours: 120

**INTC D8011 084. Advanced diagnosis and treatment planning***Professors Evangelidis, Lichtenthal, and staff. Fourth year.*

Case-based seminars for fourth-year students review complex clinical cases, treatment planning sequences, and treatment alternatives.

Lecture hours: 16

Small group session hours: 10

Examination hours: 2

**Community Health and Behavioral Sciences****BHSC D5104 081. Health promotion***Professor L. Tepper. First year.*

The role of behavior in health has received increasing attention in the United States as the causes of death have shifted from infectious and dietary diseases to chronic diseases. Mortality from most of today's leading causes of death could be substantially reduced if people would adopt lifestyles that promote wellness, such as eating healthful diets, not smoking, managing stress, exercising regularly, and understanding the prevention of substance abuse. This course provides students with an understanding of health-related behavior and health promotion. This information will be valuable for managing both personal health and wellness and promoting health and preventing disease in their future patient population.

Lecture hours: 8

Examination hours: 1

**BHSC D5855 081. Professionalism in dentistry***Professor Myers. First year.*

An eight-hour seminar offered at the beginning of the first year given in a case-based format. It is an introduction to professional ethical behavior. An initial lecture is made on the ethics of the dental profession, the professional code of conduct, and the personal decision-making processes in ethical dilemmas. Small groups then discuss cases that have an ethical question to be answered. Finally, each case is presented to the entire group by student presentation for open discussion.

Lecture hours: 2

Seminar hours: 6

**BHSC D6851 082. Introduction to the patient***Professor L. Tepper and staff. Second year.*

Helps students develop the knowledge, skills, and personal qualities necessary for effective interpersonal communication in the dental setting. Includes interviewing and history-taking skills, nonverbal cues, patient anxiety reduction, and psychosocial and ethnocultural aspects of patient care. Explores ethical issues in patient-dentist and dentist-patient communication.

Lecture hours: 14

Laboratory hours: 2

Conference/review hours: 5

Examination hours: 1

**COMH D7104 083. Oral health care delivery***Professors Albert and Kunzel. Third year.*

Delivery of dental care and the structure of dental practice considered within the context of current social, economic, technological, demographic, and epidemiological trends in dentistry. Explores in particular the role that government and the private insurance industry have had in restructuring the delivery of dental care, as well as the impact of health care regulation and quality assessment. By analyzing these current trends and dentistry's response to them, the student is better prepared to make logical decisions regarding his/her own career and is more cognizant of the factors influencing the practice of dentistry today.

Lecture hours: 19

Examination hours: 4

**DAUT D7151 083. Practice management***Professor Yablon and visiting faculty. Third year.*

Lectures and seminars to familiarize the student with the business side of dentistry. While practice management has no direct connection to clinical dentistry, mastering its concepts promotes a more rewarding and satisfying career, developing a better understanding of the interpersonal relationships among colleagues, patients, staff, and other people.

Lecture hours: 11

Conference/review hours: 11

Examination hours: 1

**BHSC D7160 083. Ethics***Professor Miner and staff. Third year.*

Trained facilitators from the New York Academy of Dentistry, in small seminars using scenarios underscoring dental ethical issues, guide discussion on the various dilemmas confronting today's professional. Follow-up seminars are offered in the fourth year in the Senior Interdisciplinary Series. (OPDN D8001 084)

Small group session hours: 8

**BHSC D7851 083. Dental interviewing***Professor L. Tepper and staff. Third year.*

Focuses on skills learned in D6851 and emphasizes the gathering, interpreting, and synthesizing necessary to make appropriate treatment planning decisions about information related to psychosocial aspects of care. Students learn from their clinical experiences by critically analyzing themselves and their classmates using self-prepared videotapes of their patient interactions. Ethical issues that have surfaced during patient care are examined.

Lecture hours: 8 (combined lecture and seminars)

Conference/review hours: 5

Examination hours: 0 (oral and written projects)

**INTC D7900 083. Spanish***Ms. Bolanos-Tamayo and staff. Third year.*

Basic introduction to and exercise in simple Spanish phrases and a dental practice-oriented vocabulary that is necessary to interact with Spanish-speaking patients who seek dental care in the School's clinical facilities.

Lecture hours: 1

Small group exercise hours: 6

Examination hours: 1



**BHSC D8022 084. Gerontology/geriatric dentistry***Professors Formicola and L. Tepper. Fourth year.*

Lectures on the dental, medical, psychological, social, and economic aspects of aging and factors affecting dental utilization for the older patient, with treatment planning protocols for both well and compromised elders.

Lecture hours: 10

Laboratory hours: 5

Conference/review hours: 5

Examination hours: 1

(Online treatment planning—10 cases)

(Online exam)

**Oral and Maxillofacial Surgery**

This section includes Stomatology and Oral Radiology.

**ORSG D6401 082. Local anesthesia***Professor S.J. Scrivani. Second year.*

The student should become knowledgeable with regard to the safe and effective administration of local anesthetics in the practice of dentistry. Specifically, the student should understand: (1) neurophysiology of pain perception, (2) the pharmacology of amide and ester local anesthetics and vasoconstrictors, (3) the relevant maxillomandibular anatomy and its relation to orofacial pain and anesthesia, (4) prevention and management of complications associated with the use of local anesthetics, and (5) the techniques of local anesthetics administration. (Note: The hands-on clinical exercise in local anesthetic administration takes place in the spring.)

Lecture hours: 9

Laboratory hours: 2

Examination hours: 1

**ORSG D6403 082. Introduction to oral and maxillofacial surgery***Professor L. Mandel and OMFS staff. Second year.*

Didactic lecture series introduces the student to the basic concepts of management of a surgical patient, including patient assessment, peri-operative patient management, and aseptic technique/infection control protocol. Emphasizes the armamentarium, techniques, and complications of exodontia.

Lecture hours: 12

Conference/review hours: 2

Examination hours: 1

**ORSG D6500 082. Physical diagnosis***Professor S.J. Scrivani and staff. Second year.*

Education and training in obtaining a medical history, performing a physical examination, and documenting both. Part of the training takes place during a one-week extramural hospital rotation. The development of these skills and techniques will be a sequenced process. An important objective is to have the student use these skills and knowledge to assign a risk assessment to his/her patients.

Lecture hours: 18

Rotation hours: 40

Conference/review hours: 2

Examination hours: 1

**ORSG D7402 083. Basic oral and maxillofacial surgery***Professor L. Mandel and staff. Third year.*

Further discussion on basic oral and maxillofacial surgical services including introductory lectures in areas involving the full scope of oral and maxillofacial surgery. Clinical experience in delivering ambulatory oral and maxillofacial surgery services.

Lecture hours: 45

Examination hours: 4

Clinical hours: 24

**ORSG D7412 083. Pain and anxiety control***Professor S.J. Scrivani. Third year.*

Students should develop an understanding of the following: (1) indications for systemic pain management protocols, (2) patient selection and evaluation, (3) sedative technique, especially oral inhalation and parenteral methodologies, (4) patient management and emergency intervention, and (5) the use of the operating room.

Lecture hours: 11

Examination hours: 1

**ORSG D7500 083. CPR/medical emergencies***M. Caffrey and staff (Emergency Medical Consulting). Third year.*

Lectures, demonstration, and training for basic life support certification. Management of practical emergencies is reviewed in detail. Approved by American Heart Association.

Lecture hours: 8

Laboratory hours: 4

Examination hours: 1

**ORSG D7505 083. Physical diagnosis clerkship***Professors S.J. Scrivani and L. Mandel. Third year.*

As a follow up to ORSG D6500 082, each student is assigned as an extern to the Oral and Maxillofacial Surgery Service of an affiliated hospital for one month. The student is expected to participate in all of the didactics and clinical activities of the department. This includes lectures, seminars, journal club, rounds, performing histories and physical examinations on both inpatients and outpatients, assisting in the surgical care of patients in the clinic, operating room, and emergency room, and assisting in the admissions, discharge, and peri-operative management of patients.

Hours: 160

**ORSG D7865 083. Infection control***Professor Myers. Third year.*

Overview of blood-borne pathogens and transmission of infectious diseases. Discussion of protective measures to prevent transmission in the dental practice setting. Meets New York and other state licensure requirements.

Lecture hours: 1

Follow-up evaluations in the clinics

**ORSG D8011 084. Extramural hospital rotation***Professor L. Mandel. Fourth year.*

Assignments to various affiliated hospitals once a week for 18 weeks with the purpose of having the students deliver dental services in a hospital setting. Such facilities offer the

student exposure to a patient population whose access to care is limited by systemic disease and social, economic, and cultural conditions.

Hours: 144

### *Stomatology*

#### **PATH D6371 082. Oral pathology**

*Professor Pulse. Second year.*

Lectures on the clinical, radiographic, and histopathologic features of numerous common oral mucosal and jaw entities. Differential diagnosis and treatment options are emphasized.

Lecture hours: 14

Examination hours: 2

#### **STOM D7912 083. Clinical oral pathology and medicine**

*Professors Pulse and D. Zegarelli. Third year.*

A 90-hour didactic course devoted to the clinical, radiographic, and microscopic features of numerous oral disease entities. Common, uncommon, and many rare diseases are studied in a comprehensive manner. Differential diagnosis is emphasized. The interrelationships of many diseases along with their treatments are discussed.

Lecture hours: 80

Conference/review hours: 4

Examination hours: 6

#### **STOM D7913 083. Facial pain**

*Professor S.J. Scrivani and staff. Third year.*

Lectures on the various aspects of facial pain and its diagnosis and treatment. Emphasis on temporomandibular joint disorders.

Lecture hours: 11

Examination hours: 1

#### **ORSG D8460 084. Clinical cancer training**

*Professor M. Marder. Fourth year.*

Lectures on the clinical diagnosis and dental and oral management of tumors of the head and neck. Legal responsibilities, psychosocial issues, and recent advances in the field of cancer.

Lecture hours: 15

Examination hours: 1

### *Oral Radiology*

#### **RADI D6902 082. Oral radiology**

*Professor Serman and staff. Second year.*

Lectures on the pertinent basic concepts of radiation physics, radiation biology, health physics, radiation safety, projection geometry, dental radiology, radiography, and their application in clinical practice.

Lecture hours: 21

Laboratory hours: 3

Conference/review hours: 6

Examination hours: 2

#### **RADI D7932 083. Oral radiology**

*Professor Serman and staff. Third year.*

Preclinical manikin laboratory on intraoral radiology, introduction to radiography techniques, exercises in oral radiographic interpretation. Didactic and clinical course

with seminars enabling students to take, process, and interpret intra- and extraoral radiographs.

Lecture hours: 34

Laboratory hours: 8

Conference/review hours: 6

Examination hours: 2

#### **RADI D8931 084. Oral radiology clinic**

*Professors Serman and Horrell. Fourth year.*

Rotations in oral radiology during which students take intra and extra oral radiographs and are required to write reports on the radiographs taken; have seminars on differential diagnoses of radiographs, as well as demonstrations of selected extra oral radiographic techniques.

Lecture hours: 4

Clinic hours: 50

Conference/review hours: 8

### *Orthodontics*

#### **ORTH D7502 083. Principles of orthodontics**

*Professor Efstratiadis and staff. Third year.*

Lectures, seminars, laboratory, and clinic. Basic concepts in orthodontic diagnosis and treatment planning with special emphasis on the identification and evaluation of malocclusions. Instruction in diagnostic and treatment procedures enables the student to recognize, classify, and assess malocclusions effectively. Appliances for interceptive and adjunctive orthodontic treatment are constructed in the laboratory and used in the clinic for correction of uncomplicated localized orthodontic problems.

Lecture hours: 37

Laboratory hours: 33

Conference/review hours: 8

Examination hours: 4

#### **ORTH D8800 084. Clinical practice of orthodontics**

*Professors Cangialosi, Efstratiadis, and staff. Fourth year.*

Diagnosis and treatment of minor orthodontic tooth positioning and other problems requiring limited tooth movement.

Clinic hours: 25

### *Pediatric Dentistry*

#### **PEDI D7656 083. Preclinical pediatric dentistry technique**

*Professor Metcalf and staff. Third year.*

Preclinical instruction in restorative techniques frequently utilized in the treatment of children. Modifications of tooth preparations for primary and young permanent teeth are stressed.

Laboratory hours: 24

#### **PEDI D7710 083. Theory of pediatric dentistry**

*Professor Kohli and staff. Third year.*

Lectures and seminars on diagnosis and treatment planning for the primary and mixed dentition. Emphasis is placed on consideration of the entire child from psychological, medical, and oral health perspectives. The student learns to provide appropriate preventive measures, patient management, care of trauma, adhesive restorative techniques, space maintenance, and interceptive and preventive orthodontic procedures for children and adolescents.



The clinical phase of the course is held once weekly beginning in April and concentrates on the application of the preceding principles.

Lecture hours: 24  
Conference/review hours: 2  
Clinic hours: 14  
Examination hours: 4

**PEDI D8300 084. Child abuse recognition and reporting**

*Professor Burkes. Alternating years: third or fourth year.*  
Lecture and discussion of clinical manifestations of child abuse. Responsibility of practitioner to report suspected abuse is stressed. Reporting contacts and procedures are provided. Meets New York State and other licensure requirements.  
Lecture hours: 3

**PEDI D8651 084. Practice of pediatric dentistry**

*Professor Kohli and staff. Fourth year.*  
Students are assigned to treat children and adolescents one-half day per week. Comprehensive oral health care and preventive procedures are performed. All routine

aspects of clinical care of children are covered.  
Clinical hours: 59

**Periodontics**

**PDNT D6702 082. Principles of periodontics**

*Professor How and staff. Second year.*  
Lectures in the diagnosis, etiology, and treatment of periodontal diseases. Application of basic biologic sciences to the pathogenesis and treatment of periodontal diseases.  
Lecture hours: 26  
Examination hours: 3

**PDNT D6710 082. Workshop and clinical practice in periodontics**

*Professor How and staff. Second year.*  
Laboratory and clinical practice in examination and documentation of clinical findings in the periodontal patient: prophylaxis, subgingival scaling and root planing; teaching and motivating patients to perform personal oral hygiene.  
Laboratory hours: 24

**PDNT D7702 083. Clinical practice of periodontics***Professor How and staff. Third year.*

Clinical experience. Emphasis on the clinical management of more complex periodontal cases, including the performance of simple periodontal surgical procedures. Observation and assistance of postdoctoral periodontics students in surgical and other procedures.

Clinical hours: 2 semesters as part of comprehensive dental treatment

Examination hours: 2

**PDNT D8710 084. Advanced clinical practice of periodontics***Professor How and staff. Fourth year.*

Clinical experience. Emphasis on the clinical management of more complex periodontal cases, including the performance of simple periodontal surgical procedures. Observation and assistance of postdoctoral periodontics students in surgical and other procedures.

Clinic hours: 2 semesters as part of comprehensive dental treatment.

**Restorative Dentistry and Endodontics**

This section includes Endodontics, Operative Dentistry, and Prosthodontics.

*Endodontics***ENDO D7201 083. Endodontic theory and technique***Professor Caley and staff. Third year.*

Lectures and seminars on the fundamentals of endodontics. Demonstrations and exercises in endodontic technique on extracted teeth.

Lecture hours: 20

Laboratory hours: 72

Examination hours: 5

**ENDO D8202 084. Advanced clinical practice in endodontics***Professors Caley and Hasselgren. Third and fourth years.*

Clinical experience in advanced problems in endodontic therapy and technique. An examination has been added to this course as of 1998–99.

Clinical hours: 3 semesters as part of comprehensive dental treatment

Examination hours: 1

*Operative Dentistry***OPDN D5450 081. Dental anatomy and occlusion****OPDN D5452 081. Dental anatomy technique***Professors Freeman, Hadavi, and staff. First year.*

Lectures and laboratory sessions in oral anatomy, dental morphology, phylogeny of the dentition, and dental occlusion.

Lecture hours: 33

Laboratory hours: 56

Examination hours: 18

**OPDN D6301 082. Introduction to operative dentistry***Professor Hadavi and staff. Second year.*

Lectures on the fundamentals of operative dentistry, including the etiology and diagnosis of caries, and the biological approach to the technical procedures in treatment planning and the intra-coronal and extra-coronal restoration of teeth.

Lecture hours: 52

Examination hours: 6

**OPDN D6305 082. Preclinical operative technique***Professor Hadavi and staff. Second year.*

Demonstrations, laboratory, and simulated exercises in the fundamental techniques of operative dentistry. The development of the basic skills necessary to the delivery of restorative dentistry.

Laboratory hours: 70

Examination hours: 16

**OPDN D7304 083. Operative dentistry***Professor Hadavi and staff. Third year.*

Continuation and expansion of concepts introduced in the second year.

Lecture hours: 6

Examination hours: 3

**OPDN D7305 083. Preclinical operative technique***Professor Hadavi and staff. Third year.*

Continuation of the demonstrations, laboratory, and simulated exercises introduced in the second year.

Laboratory hours: 21

Examination hours: 7

**OPDN D7308 083. Clinical restorative dentistry***Professor Zubiaurre and staff. Third year.*

Introduction to the clinical practice of restorative dentistry. Clinical experience in the recognition of disease and related conditions, examination, treatment planning, prevention, and restoration to form and function.

Clinic hours: 2 semesters as part of comprehensive dental treatment

**OPDN D7340 083. Esthetic dentistry***Professor Lichtenthal and staff. Third year.*

Diagnosis, treatment planning, technique, and materials related to the delivery of esthetic dental care. Preclinical laboratory experience in the preparation for and placement of esthetic restorative materials in a simulated environment prior to clinical patient care.

Lecture hours: 10

Laboratory hours: 24

Examination hours: 2

*Prosthodontics***PROS D5800 081. Prosthodontics technique***Professors Freeman, Iisu, and staff. First year.*

Laboratory course that introduces the basic principles of preparation and design of single-unit full coverage restorations and fixed partial prostheses by means of demonstrations, audiovisual aids, and Web-based instruction. Students simulate clinical and laboratory procedures on manikin mounted models in preparation for clinical prosthodontics. This course is a continuation of basic *Dental anatomy and occlusion*.

Laboratory hours: 40

Examination hours: 4

**PROS D5820 081. Introduction to prosthodontics**

*Professors Freeman, Hsu, and staff. First year.*

Companion course to *Prosthodontics technique*.

Lectures and seminars on the basic theory and principles of fixed prosthodontics.

Lecture hours: 20

Examination hours: 2

**PROS D6800 082. Preclinical prosthodontics technique**

*Professor Phillips and staff. Second year.*

Laboratory course that introduces the basic design and fabrication of fixed, removable partial, and removable complete prostheses by means of demonstrations and audiovisual aids. Students simulate laboratory and clinical procedures on models in preparation for the clinical performance of prosthodontics.

Laboratory hours: 151

Examination hours: 15

**PROS D6820 082. Basic prosthodontics**

*Professor Phillips and staff. Second year.*

Companion to course *D6800*. Lectures and seminars on basic theory and procedures in prosthodontics.

Lecture hours: 44

**PROS D7810 083. Advanced preclinical prosthodontics technique**

*Professor Phillips and staff. Third year.*

Continuation of course *D6800*. Additional laboratory and clinical procedures are presented for student simulation.

Laboratory hours: 148

**PROS D7815 083. Intermediate prosthodontics**

*Professor Phillips and staff. Third year.*

Companion to course *D7810*. Lectures and seminars beyond the basic level on the theory and procedures in prosthodontics.

Lecture hours: 37

Examination hours: 6

**PROS D7820 083. Dental implantology**

*Professors Hahn, Psillakis, and staff. Third year.*

Lecture-based course designed to introduce the basic concepts in dental implantology to the predoctoral dental student. This course aims to prepare the student for

clinical restorative care of patients with dental implant needs. A one-day presentation will be made by a leading dental implant manufacturer and will include a two-hour hands-on session for restorative components.

Lecture hours: 18

Laboratory hours: 2

**PROS D8804 084. Advanced restorative clinical practice**

*Professors Evangelidis, Spicer, and staff. Fourth year.*

Lectures, demonstrations, and clinical experience in the biologic principles and practice of basic restorative dentistry, including operative dentistry, fixed prosthodontics, and removable prosthodontics. Emphasis is on comprehensive patient care.

Lecture hours: 11

Clinic hours: 720

*Dental Materials*

**PROS D7831 083. Dental materials**

*Dr. McAlarney. Third year.*

A lecture series covering the important chemical and physical properties of dental materials and the effect of improper manipulation on those physical properties.

Lecture hours: 15

Conference/review hours: as needed

Examination hours: 2

**PROS D8830 084. Selection of dental materials**

*Dr. McAlarney. Fourth year.*

A lecture series dealing with new developments in the materials used in dentistry. Major emphasis is placed on the materials/engineering aspects of dental implantology. Advances in orthodontic wires and brackets, as well as bonding agents, are also discussed.

Lecture hours: 10

Conference/review hours: as needed

Examination hours: 1

*Clinical Competency Examinations*

**OPDN D8302 084. Operative clinical exams**

*Professor Liehtenthal and staff. Fourth year.*

**PROS D8802 084. Prosthodontics clinical exams**

*Professor Phillips and staff. Fourth year.*

## Postdoctoral Programs in General Dentistry and the Dental Specialties

The School is authorized to grant Certificates of Training in Advanced General Dentistry and in three of the specialties: Endodontics, Orthodontics, and Pediatric Dentistry. In two other specialties—Periodontics and Prosthodontics—an M.S. degree is awarded.

The Certificate and M.S. degree programs are offered to qualified graduates in dentistry who wish either to advance their training in general dentistry or to prepare for specialization in the disciplines mentioned. The programs include advanced study in the clinical and basic sciences of dentistry. Individual programs are described below.

### ADMISSION REQUIREMENTS

To be admitted to any program, an applicant must hold the D.D.S., D.M.D., or equivalent foreign degree in dentistry. International students are required to demonstrate sufficient knowledge of English by submitting a score of 600 or higher in the Test of English as a Foreign Language (TOEFL) as part of their application. They may also be required to pass a clinical competence examination.

Applicants to the combined postdoctoral specialty and graduate (degree) programs are required to submit GRE scores as part of their application.

**When to Apply:** Before October 1 for admission in the following calendar year.

**Selection Criteria:** The Postdoctoral Admissions Committee uses the following criteria in the selection of candidates: Academic record, research and publication records, extracurricular achievements, honors and awards, class standings, professional experience, references, interview, National Board Scores (U.S. applicants), and TOEFL scores (foreign applicants).

**Admission Procedure:** Write to the Postdoctoral Admissions Office, School of Dental and Oral Surgery, 630 West 168th Street, New York, NY 10032, for an application form, which must be completed and returned to the division to which the applicant is seeking admission. The completed form should be accompanied by the application fee of \$75. This fee is required of all applicants. An application for admission cannot be considered until the fee has been paid or until it has been waived by formal action of the admissions authorities of the School. The fee is not refundable and is not credited toward tuition.

As requested in the form, the applicant should ask each of the colleges or universities attended—for both preprofessional and professional studies—to send official transcripts of the record directly to the director of the postdoctoral division to which the applicant is seeking admission, together with letters of recommendation. Official proof of current licensure should also be submitted.

**Personal Interview:** The program director may ask an applicant to come to the School for a personal interview.

**Acceptance Fee:** Within ten days after receiving notice of acceptance, the applicant must notify the Postdoctoral Admissions Committee that he or she intends to enroll and must send a check or money order for the amount specified in the acceptance letter, made payable to Columbia University. This acceptance fee is credited to the applicant's tuition upon registration in the class to which he or she has been admitted. If the applicant does not register in that class, the acceptance fee will be retained by the University.

### CORE COURSES

A common core of scientific knowledge forms the basis for all postdoctoral Certificate and M.S. degree programs. The core courses are taught by an interdisciplinary group of faculty and are available to students in all programs, as applicable to their specific educational needs.

#### DN5C D9900 001. Research methodology and biostatistics

*Professor Hasselgren and staff.*

A lecture series by selected faculty from different areas of research. A major portion of the lecture series deals with biostatistics with an emphasis on clinical research. Other lectures deal with scientific writing, how to publish an article, and ethics in research with an emphasis on clinical studies. Research-oriented faculty from the different clinical areas of dentistry present the research frontiers in their special fields, the methods used, and the problems they are attempting to solve. The use of models in research is presented during a special lecture. Also, pain research is dealt with specially.

Hours: 30, including a final examination

#### DN5C D9901 081. Cariology

*Professor Albert.*

Dentistry's success in utilizing fluorides to prevent smooth surface caries is a classic story of public health. The introduction of sealants to reduce the number of pit and fissure caries is a continuation of a preventive treatment modality that alters the caries process. In this course, students are presented with current concepts in cariology as published in recent literature. Topics include the changing paradigms in restorative dentistry, risk of fluorosis in fluoridated populations, the CDC 2000 fluoride guidelines treating caries as an infectious disease, and areas of promising research in cariology including the search for a caries vaccine.

4 one-hour seminars

#### DN5C D9903 001. Human development

*Professors Cangialosi and Yuan.*

Lectures on childhood and adolescent growth; development of the dentition; hereditary and environmental influences on growth; craniofacial malformations; and prediction of facial growth.

Lecture hours: 4

#### DN5C D9904 001. Craniofacial anomalies

*The staff.*

Discussion of various craniofacial anomalies, with emphasis on etiology, morphology, development, and clinical management.

Seminar hours: 4

**DNSC D9910 001. Clinical stomatology conferences***Professors Pulse, Serman, and D. Zegarelli.*

Presentation of cases with a comprehensive, interdisciplinary discussion of clinical, radiographic, and histologic differential diagnosis.

Hours: 16

**DNSC D9911 001. Functional anatomy of the head and neck***Professor Moss.*

Intends to provide a unifying overview of the perennial topics of "form and function" by examining some of the fundamental commonalities underlying the differential concepts adopted by a number of seemingly disparate disciplines. This is accomplished by considering the following principal topics, among others: (1) the "functional matrix hypothesis"; (2) fundamentals of musculoskeletal biomechanics; (3) genomic and epigenetic regulation; (4) finite element methods of analysis of growth; (5) role of bone and dentinal fluids in mechanotransduction; (6) complexity theory, neural networks, scaling, and fractals; (7) the "phi" principle. Assignments are to be completed during the course.

Hours: 30, including a final examination

**DNSC D9913 001. Panoramic radiography***Professor Serman.*

Lectures, clinical demonstrations, and exercises on the theory and application of panoramic radiography. Principles of image formation, image interpretation, and radiographic artifacts are discussed.

Lecture hours: 4 and clinical assignments

**DNSC D9916 001. T.M. disorders***Professor S.J. Scrivani and staff.*

Lectures on the various aspects of facial pain and its diagnosis and treatment. Emphasis is placed on temporomandibular joint disorders.

Lecture hours: 16

**DNSC D9918 001. T.M.J. dysfunction—myofascial pain***Professor S.J. Scrivani.*

Rotations in the T.M.D. clinic with participation in the clinical management of patients with temporomandibular joint disorders.

Morning session, once a week for a semester

**DNSC D9925 001. Oral biology***Professor Moss-Salentin and interdisciplinary staff.*

A multidisciplinary lecture series that provides an integrated review of the biology of the oral cavity and adnexa. It encompasses the embryology of the orofacial region, the anatomical and physiological aspects of innervation and vascularization of dental and oral tissues, speech and swallowing, the histology of the oral mucosa and gingiva, immunology and microbiology of the oral cavity, the biochemistry and microbiology of saliva and gingival crevicular fluid, and the physiology of taste, olfaction, and pain.

Hours: 30, including a final examination

**DNSC 9930 001. Biology of mineralized tissues***Professors Moss and Moss-Salentin; invited lecturers.*

A group of selected lecturers from Columbia University and other academic institutions in the greater metropoli-

tan area presents in lecture/seminar form various aspects of vertebrate mineralized tissues, with an emphasis on bone tissue. The multidisciplinary faculty presents an in-depth overview of mineralized tissues by focusing on developmental, morphologic, physiologic, biomechanical, and biochemical aspects of these tissues. Reading assignments are given by the lecturers, as well as a few assignments to be completed during the course.

Hours: 30, including a final examination

**DNSC D9935 001. Dental materials***Dr. McAlarney.*

Lectures/seminars of interest particularly to students in the Orthodontics and Prosthodontics specialty programs. Major emphasis is placed on materials/engineering aspects of dental implantology. Advances in orthodontic wires and brackets, as well as bonding agents are also discussed. Assignments are to be completed during the course.

Hours: 8

**DNSC D 9944 001. Clinical practice issues***Professor Silberman and staff.*

Some of the clinical practice issues that face the specialty practitioner. The first nine lectures/seminars address dental office administration and management. The following lectures discuss pharmacological considerations in the dental practice, as well as the management of HIV patients and psychiatric cases in the dental office. Assignments are to be completed during the course.

Hours: 15

**DNSC D9990 001. Pedagogy of preclinical and clinical teaching***Professor Fine and staff.*

Intensive training and practice in teaching. Two sessions per week of preclinical or clinical teaching to predoctoral dental students. Teaching experience is supervised by members of the faculty.

Hours: 176

**ADVANCED EDUCATION IN GENERAL DENTISTRY CERTIFICATE PROGRAMS**

The postdoctoral program in Advanced Education in General Dentistry (AEGD) is designed to offer the recent dental graduate clinical and didactic expertise in all phases of dentistry. Upon completion of the program, the dentist will be more prepared to approach the complex treatment decisions of modern day dental practice. The curriculum consists of both clinical and didactic components. Fellows devote 60 percent of their time to the treatment of patients, while 40 percent is dedicated to electives that may include hospital rotations, research, pediatric dentistry, oral and maxillofacial surgery, periodontics, endodontics, public health, and ambulatory care.

**ADVANCED EDUCATION IN DENTISTRY—PRIMARY CARE**

This program is offered in addition to the standard AEGD program. This program's mission is to train primary oral health care practitioners who can care for diverse patient populations in the context of family, culture, and community. It is intended for dentists with a strong commitment to

working in community settings with medically compromised and special patients, including those with HIV/AIDS.

DNSC D9910 001	Clinical stomatology conferences
DNSC D9916 001	T.M. disorders
DNSC D9944 001	Clinical practice issues
DNSC D9985 001	Seminars in clinical dentistry
RSRH D0009 001	Research—advanced general dentistry

#### DNSC D9985 001. Seminars in clinical dentistry

*Professors Bunza, Zabos, and staff.*

Lectures and seminars in periodontics, endodontics, radiology, oral surgery, prosthodontics, restorative dentistry, pediatric dentistry, and orthodontics. Weekly case presentations and journal club series.

### POSTDOCTORAL CERTIFICATE PROGRAM IN ENDODONTICS

This two-year program provides a specialist training in endodontics. The program consists of basic science courses and courses more directly related to clinical endodontics. The basic science core courses are given primarily during the first year.

In addition to these courses, topics more directly related to the endodontics clinic are given throughout the two years, e.g., *Theory and practice of endodontics, Anatomy and technique of endodontics, Pulp biology, Surgical endodontics, Endodontic-periodontic relationships, Clinical practice in endodontics, and Review of endodontic literature.*

In addition to these courses there is a series of guest lectures, where lecturers are invited to give their views or latest research results on selected topics.

In clinical endodontics the students are exposed to a faculty with vast clinical experience. One endodontic method is used as a clinical baseline. When the postdoctoral students have learned to master this method, they are encouraged to try out other methods. The clinical faculty, most of whom are successful practitioners in New York City, come from different universities, and they can therefore expose the students to different ideas. Because an excellent way of learning a topic is to teach it, the students are involved in the teaching of predoctoral dental students.

The Division of Endodontics is strongly research oriented. Students are required take part in at least one research project.

#### First Year

ENDO D9200 081	Theory and practice of endodontics
ENDO D9204 081	Anatomy and technique of endodontics
ENDO D9206 081	Clinical practice of endodontics
ENDO D9210 081	Review of endodontic literature
ENDO D9216 081	Pulp biology
ENDO D9218 081	Surgical endodontics
ENDO D9228 081	Guest lecture series
DNSC D9900 001	Research methodology and biostatistics
DNSC D9910 001	Clinical stomatology conferences
DNSC D9913 001	Panoramic radiography

DNSC D9925 001
DNSC D9930 001
DNSC D9944 001
DNSC D9990 001

Oral biology  
Biology of mineralized tissues  
Clinical practice issues  
Pedagogy of preclinical and clinical teaching

#### Second Year

ENDO D9208 082	Clinical practice of endodontics
ENDO D9212 082	Review of endodontic literature
ENDO D9220 082	Surgical endodontics
ENDO D9222 082	Thesis
ENDO D9230 082	Guest lecture series
DNSC D9916 001	T.M. disorders
DNSC D9990 001	Pedagogy of preclinical and clinical teaching

#### Courses of Instruction

##### ENDO D9200 081. Theory and practice of endodontics

*Professors Goodman and Solomon.*

Lectures and seminars on past and current theory in endodontics and its relation to modern endodontic practice. Guest lecturers will speak on current developments in the field of endodontics or related disciplines.

Hours: 90

##### ENDO D9204 081. Anatomy and technique of endodontics

*Professors Caley, Cantor, and Hasselgren.*

Lectures and laboratory sessions on the anatomy of roots, pulp chambers, and root canals. Lectures and demonstrations on endodontic armamentarium and materials. Lectures, demonstrations, and technique sessions on the cleaning, shaping, and filling of canals of extracted teeth.

Hours: 45

##### ENDO D9206 081, D9208 082. Clinical practice of endodontics

*Professor Hasselgren and staff.*

Supervised clinical experience in all phases of operative endodontics. During the second year, instruction and experience teaching predoctoral clinical endodontics are included.

##### ENDO D9210 081, D9212 082. Review of endodontic literature

*Professor Hasselgren.*

Intensive discussion of past and current literature in endodontics and related fields. Reports by students on reading assignments.

##### ENDO D9216 081. Pulp biology

*Professor Hasselgren.*

Normal and pathological conditions of the dental pulp. Biological background for pulpal injury, inflammation, and repair.

Hours: 32

##### ENDO D9218 081, D9220 082. Surgical endodontics

*Professor Kellert.*

Lectures, demonstrations, and clinical experience in problems requiring surgical endodontic treatment.

Lectures: 26

Clinic hours: 78



**ENDO D9228 081, D9230 082.** Guest lecture series  
Prominent researchers are invited to lecture or conduct seminars in the areas of late advances in endodontic theory, practice, or research.

**ENDO D9292 082. Thesis**  
*Professor Hasselgren.*

The student conducts an investigation approved by the program director. The results of the investigation must be presented in the form of a thesis, which should be completed one month before the end of the final term. If possible, the results shall be published in a respected journal.

**POSTDOCTORAL CERTIFICATE  
PROGRAM IN ORTHODONTICS**

The postdoctoral training program in the Division of Orthodontics begins in July of each year and extends for a period of twenty-four consecutive months. It provides intensive advanced training in the biological and clinical sciences related to the art and science of orthodontics and is designed to satisfy all requirements for eligibility for the specialty board in orthodontics. The program, fully accredited by the A.D.A., is well rounded and provides balanced training in clinical orthodontics and the basic sciences relative to orthodontics, so that the graduate of this program is prepared to pursue a career as a clinician with practice limited to orthodontics and as a teacher in clinical orthodontics.

To provide clinical experience, lectures, seminars, and extensive laboratory courses are integrated with the treatment of various classifications of malocclusions in the clinic using fixed multibanded and bonded techniques as well as removable, functional, and orthopedic appliances. Emphasis is given to the fundamental edgewise and Begg philosophies of treatment. Several modifications of basic edgewise mechanotherapy are taught in addition to the differential force straight wire technique. Lectures on temporomandibular dysfunction prepare the student for rotations in the multidisciplinary T.M.D. clinic. Joint conferences and clinic sessions are held with the Division of Oral and Maxillofacial Surgery to present cases, plan treatment, and review patient progress. Students also regularly attend cleft palate/craniofacial team conferences and attend multidisciplinary seminars in adult orthodontics and the periodontally compromised patient.

The postdoctoral student is required to submit a written thesis (in this case to the division) to qualify for graduation. Thus, all students are required to engage in research activities. To acquaint the student with the procedures for certification by the American Board of Orthodontics, another requirement for graduation is the presentation of records of two completed patients according to A.B.O. guidelines. These presentations are arranged as mock A.B.O. examinations in front of board-certified faculty.

**First Year**

ORTH D9500 081	Orthodontic technique
ORTH D9956 081	Introduction to orthodontics

DNSC D9957 001	Cephalometrics: growth and development
ORTH D9958 081	Orthodontic diagnosis and treatment planning
ORTH D9502 081	Clinical orthodontic practice
ORTH D9507 081	Biomechanics
ORTH D9516 081	Orthodontic literature review
ORTH D9522 081	Theory and practice of orthodontics
ORTH D9526 081	Thesis
DNSC D9900 001	Research methodology and biostatistics
DNSC D9903 001	Human development
DNSC D9904 001	Craniofacial anomalies
DNSC D9910 001	Clinical stomatology conferences
DNSC D9911 001	Functional anatomy of the head and neck
DNSC D9913 001	Panoramic radiography
DNSC D9918 001	T.M.J. dysfunction-myofascial pain
DNSC D9925 001	Oral biology
DNSC D9930 001	Biology of mineralized tissues
DNSC D9935 001	Dental materials
ORTH D9966 081	Surgical orthodontics
DNSC D9990 001	Pedagogy of preclinical and clinical teaching

**Second Year**

ORTH D9504 082	Clinical orthodontic practice
ORTH D9508 082	Practice management in orthodontics
ORTH D9510 082	Orthodontic diagnosis and treatment planning
ORTH D9518 082	Orthodontic literature review
ORTH D9520 082	The cleft palate patient
ORTH D9524 082	Theory and practice of orthodontics
ORTH D9528 082	Thesis
ORTH D9540 082	Orthodontic-periodontic relationships
DNSC D9916 001	T.M. disorders
DNSC D9918 001	T.M.J. dysfunction-myofascial pain
DNSC D9944 001	Clinical practice issues
ORTH D9968 082	Surgical orthodontics
DNSC D9990 001	Pedagogy of preclinical and clinical teaching

**Courses of Instruction**

**ORTH D9500 081. Orthodontic technique**  
*Professors Bramante, Cangialosi, and Meistrrell. First year.* This course, together with the courses *Introduction to orthodontics* and *Theory and practice of orthodontics*, makes up the preclinical phase of instruction and includes lectures, seminars, demonstrations, and laboratory exercises in impression and study-model construction and in the fabrication and manipulation of various orthodontic appliances, including the standard edgewise, Straight Wire, and Tip Edge. In addition, students are trained in the use of removable, functional and auxiliary appliances in the treat-

ment of various classifications of malocclusion. The objective is to prepare the student to begin patient care in the clinic.

Hours: 200

#### **ORTH D9502 081, D9504 082. Clinical orthodontic practice**

*Professor Cangialosi and staff. First and second years.*

Course D9502 is given in the first year of the program and concentrates on techniques of record gathering, diagnosis and treatment planning, patient management, and treatment procedures. The main treatment modalities utilized are the Edgewise and Begg or Tip Edge appliances. Each student is assigned a number of patients representing the variety of malocclusions found in an orthodontic practice, for treatment under the supervision of faculty. In course D9504, students are assigned additional patients who are transferred from graduating students. Emphasis is placed on ideal case finishing and on the retention phase of treatment. The objective is to prepare the student, upon graduation, to be proficient in clinical orthodontic treatment procedures.

Hours: 1,920

#### **ORTH D9507 081. Biomechanics**

*Staff. First year.*

Lectures in the fundamentals of physics and engineering and their application in orthodontic techniques. Also included are mechanotherapy in various orthodontic techniques and critical evaluation of new concepts and materials. A thorough presentation of the biology of tooth movement is presented. Course objectives are to give the student in-depth knowledge and insight into basic and applied mechanics and to firmly establish a biological basis for orthodontic treatment.

Hours: 14

#### **ORTH D9508 082. Practice management in orthodontics**

*Professors Hudecz and Meistrell. Second year.*

Lectures in the setting up and ongoing administration of an orthodontic practice as well as ethical and legal concerns in the practice of orthodontics. Includes information on purchasing a practice and the professional relationship between partners and associates. Prepares students to assume the responsibilities of administration of an orthodontic practice; informs them of the legal issues involved in practice; and instills a strong sense of ethical behavior in the conduct of their practice.

Hours: 12

#### **ORTH D9516 081, 9518 082. Orthodontic literature review**

*Professors Efstathiadis and Siegel. First and second years.*

The objective is to enable the student to: (1) gain knowledge of the past and current orthodontic literature, (2) read the literature critically and be encouraged to continue to do so during his/her entire professional lifetime, (3) utilize the appropriate information gained in the clinical setting, (4) choose a research project and write a comprehensive thesis, and (5) pass the written portion of the A.B.O. examination. At each session the assigned student presents the assigned articles to the class stating the goals and objectives of the study, the methodology used, and the observed results. The student is expected to critically analyze and evaluate the methods and results as well as elaborate on the importance of the topic and its

clinical relevance. Following the presentation, the student directs an active discussion among the members of the class with the help of the faculty member.

Hours: 80

#### **ORTH D9520 082. The cleft palate patient**

*Professor Isaacson.*

Lectures and case presentation seminars related to the various problems encountered in the treatment of the patient with cleft palate and other craniofacial anomalies. Emphasis is placed on the concept of team management in the rehabilitation of these patients. Coordination of interdisciplinary treatment planning including surgery, speech and hearing, ENT, prosthetics, psychiatry, etc., is also emphasized. Objectives are to acquaint students with the special problems involved in the treatment of these patients and to prepare them to become members of cleft palate teams in their communities.

Lecture hours: 14

#### **ORTH D9522 081, D9524 082. Theory and practice of orthodontics**

*Professor Cangialosi and staff.*

Lectures, seminars, and demonstrations in which theory is correlated with clinical practice and observation. Topics include various aspects of fixed and removable mechanotherapy, manipulation of appliances, and treatment of various types of malocclusion. Serves as a complement to the course *Clinical orthodontic practice*, which is designed for gaining proficiency in clinical practice.

Lecture hours: 80

#### **ORTH D9526 081, D9528 082. Thesis**

*Professor Cangialosi and staff.*

An original research project pertinent to the field of orthodontics, either basic or clinical, is required. Student conducts an investigation dealing with a subject of his/her choice and approved by the faculty. Each project must have a faculty sponsor. Results of the project must be presented in the form of a written document completed one month before the end of the final semester and judged satisfactory by the sponsor and Research Committee. Objectives are to stimulate and encourage interest in research on the part of students and prepare them to critically evaluate the literature.

Hours: 280

#### **ORTH D9540 082. Orthodontic-periodontic relationships**

*Professor Fine and staff.*

Students gain an overview of the pathogenesis of periodontal diseases with particular emphasis on conditions which may be improved by orthodontic therapy, as well as those conditions that may be a contraindication to orthodontic treatment. Students are acquainted with the importance and need for careful evaluation of patients with respect to their periodontal condition and the special needs of adult patients undergoing orthodontic treatment.

Lecture hours: 14

#### **ORTH D9556 081. Introduction to orthodontics**

*Professor Cangialosi and staff.*

Series of lectures giving an overview of the field of orthodontics. Topics include the concept of normal occlusion, etiology and classification of malocclusion, preventive and



interceptive orthodontics, unfavorable sequelae of malocclusion, principles of mechanotherapy, limitations of treatment, treatment during growth, adult treatment, and retention and relapse. Enables the student to understand the scope of the specialty and its interrelationship with other disciplines of dentistry and medicine. Also prepares the student for a more detailed study of the theory and practice of orthodontics and for laboratory exercises and clinical activity.

Hours: 20

**DNSC D9957 001. Cephalometrics: growth and development**

*Dr. Meistrell.*

Instruction in the theory and practice of taking standardized head roentgenograms using the cephalostat including the procedure for identifying landmarks and making tracings using various analyses. Also includes a survey of growth and development of the dentition and the craniofacial complex and how various growth patterns may be identified. Prepares the student to recognize discrepancies in tooth and jaw position and determine whether a malocclusion is primarily skeletal or dental in nature. Prerequisite to *Orthodontic diagnosis and treatment planning*.

Lecture and laboratory hours: 28

**ORTH D9958 081, D9510 082. Orthodontic diagnosis and treatment planning**

*Professor Cangialosi and staff.*

The first five sessions in the summer session of the first year are lectures by faculty in the gathering and assessing of orthodontic records and treatment planning of comprehensive orthodontic problems. Instructors bring in cases from their practices to illustrate the principles involved. The remainder of the course consists of student presentations of diagnosis and treatment planning of the cases that they

are treating in the clinic with a faculty member acting as a moderator. Students become proficient in the assessment of complex craniofacial problems and are able to formulate rational treatment plans. Preparation for taking the written part of the American Board of Orthodontics examination. Lectures hours: 80

**ORTH D9966 081, D9968 082. Surgical orthodontics**

*Professors Cangialosi and Roser.*

Lectures, laboratory exercises, and interdepartmental conferences relating to the diagnosis and treatment of those cases that exhibit extensive skeletal discrepancies that require combined orthodontic and surgical treatment for their resolution. One afternoon clinic session per week is attended by faculty of both the Division of Orthodontics and OMFS so that joint consultation is available. Provides the student with an understanding of the special problems involved with diagnosis and treatment in these cases and makes them proficient in presurgical and postsurgical orthodontic management.

Lectures hours: 25

**POSTDOCTORAL M.S. DEGREE PROGRAM IN PERIODONTICS**

The full-time program in periodontics prepares the dentist for the specialty of periodontics, either in private practice or in academics. Although it is strongly clinical in emphasis, the program requires participation in research and affords the interested student the opportunity for more intensive research training. The program consists of courses in the theory and practice of periodontics and implantology, and in the basic biologic and related medical sciences. In addition, hospital rotations provide experience in the management of inpatients and outpatients. Many schools

of thought are represented in the faculty and in the frequent guest lecturers, providing a variety of approaches to clinical problems. An atmosphere of intellectual, scientific inquiry is nurtured, and the student is encouraged to apply fundamental biological knowledge and judgment to clinical problems. Students are also given the opportunity to assist in clinical instruction of undergraduate dental students. This thirty-month program meets the educational requirements of the American Academy of Periodontology and the American Dental Association.

#### First Year

PDNT D9700 081	Clinical practice in periodontics and implantology
PDNT D9727 081	Etiology and pathogenesis of periodontal disease
PDNT D9732 081	Implantology
PDNT D9734 081	Current literature review
PDNT D9749 081	Management of the periodontal patient
PDNT D9762 081	Periodontal surgical conference
PDNT D9770 081	Wound healing
DNSC D9900 001	Research methodology and biostatistics
DNSC D9910 001	Clinical stomatology conferences
DNSC D9911 001	Functional anatomy of the head and neck
DNSC D9916 001	T.M. disorders
DNSC D9925 001	Oral biology
DNSC D9930 001	Biology of mineralized tissues
DNSC D9944 001	Clinical practice issues
DNSC D9990 001	Pedagogy of preclinical and clinical teaching

#### Second Year

PDNT D9702 082	Clinical practice in periodontics and implantology
PDNT D9714 082	Periodontal surgical conference
PDNT D9736 082	Current literature review
PDNT D9750 082	Management of the periodontal patient
PDNT D9775 082	Ethical issues in periodontics
PDNT D9780 082	Implantology literature review
PDNT D9784 082	Pain/anxiety control and pharmacology lectures
PDNT D9790 082	Independent study
DNSC D9990 001	Pedagogy of preclinical and clinical teaching

#### Third Year

PDNT D9715 083	Periodontal surgical conference
PDNT D9738 083	Current literature review
PDNT D9751 083	Management of the periodontal patient
PDNT D9772 083	Advanced clinical practice in periodontics and implantology
PDNT D9790 083	Independent study
DNSC D9990 001	Pedagogy of preclinical and clinical teaching

#### Courses of Instruction

##### PDNT D9700 081, D9702 082, D9772 083.

##### Clinical practice in periodontics and implantology

*Professor Fine and staff.*

Clinical practice in diagnosis, treatment planning, and all the phases of periodontal therapy and osseointegrated implants. Exposure to a wide variety of surgical procedures, various occlusal concepts, simple orthodontic procedures, temporary stabilization methods, and methods of patient management. Emphasis on motivating the patient to practice oral hygiene. *Five sessions per week in the first year, seven per week in the second, and five per week in the third year.*

##### PDNT D9762 081, D9714 082, D9715 083.

##### Periodontal surgical conference

*Professors Langer, Wang, and West.*

Seminars in periodontal surgical problems: analysis of student case presentations; discussion of newly introduced techniques. *One hour per week for three years.*

##### PDNT D9727 081. Etiology and pathogenesis of periodontal diseases

*Professor Papapanou and staff.*

Study of the basic anatomy and physiology of the periodontal tissues; the epidemiology, microbiology, and immunology of periodontal diseases; the key features of the various periodontal disease entities; and the interrelation of periodontal diseases and systemic health. *Three hours per week for one semester.*

##### PDNT D9732 081. Implantology

*Professors Langer, Wang, West, and visiting lecturers.*

Lectures on the diagnosis, treatment planning, and placement of osseointegrated implants, including history of implants, relevant histopathology, surgical technique, and prosthetic implications. *One and one-half hours per week for one year.*

##### PDNT D9734 081, D9736 082, D9738 083.

##### Current literature review

*Professors Papapanou and Schwartz.*

Summaries and critiques of articles in recent periodontal literature with emphasis on critical evaluation of experimental assumptions, methods, results, and conclusions. *One hour per week for three years.*

##### PDNT D9749 081, D9750 082, D9751 083.

Management of the periodontal patient. *This includes the following nine courses:*

##### Therapy literature review

*Professor Schwartz.*

Significant papers in the development of modern periodontal treatment are summarized and discussed. *One hour per week for two years.*

##### Introduction to periodontal treatment

*Professor Fine.*

The rationale and technique of current therapeutic measures are presented in case format. *One hour per week for two years.*

**Periodontal treatment planning***Professors Fine and Schwartz.*

Students present their current cases with class discussion of the planned sequence of treatment. *One and one-half hours per week for three years.*

**Periodontal medicine***Staff and guest lecturers.*

Faculty from the College of Physicians and Surgeons in various medical specialties present the issues likely to be faced by a periodontist treating a patient with diabetes, cardiovascular problems, transplants, and other systemic conditions. *One hour per week for one semester.*

**Periodontal surgical conference***Professor Wang.*

Clinical procedures are presented in case format by students and discussed by the class. *One hour per week for three years.*

**Interdisciplinary case management: periodontics/orthodontics***Professors Fine and Cangialosi.*

Significant issues arising in the management of patients requiring both orthodontic and periodontal treatment are discussed in lecture and laboratory format. *One hour per week for one semester.*

**Interdisciplinary case management: periodontics/endodontics/prosthodontics***Professors Fine, Hasselgren, and White.*

Diagnosis and therapy issues involving multidisciplinary treatment plans are presented by faculty in each discipline and discussed by the class. *One hour per week for one semester.*

**Clinical outcomes review***Professor Fine.*

Students present completed cases for discussion of whether the treatment outcome fulfills the expectations in the original treatment plan. *One and one-half hours per week for three years.*

**Physical diagnosis***Professor S. J. Scrivani.*

Seminar discusses the physical evaluation of patients presenting for treatment. *One hour per week for one semester.*

**PDNT D9770 081. Wound healing: periodontal microbiology and immunology***Professor Lamster.*

Introduction and in-depth review of the microbiology and host response in the periodontal diseases. *One hour per week for one semester.*

**PDNT D9775 082. Ethical issues in periodontics***Professor Nisselson.*

Seminar discusses resolution of ethical problems arising in the clinical practice of periodontics. *One hour per week for one semester.*

**PDNT D9780 082. Implantology literature review***Professor Langer.*

Critical review of publications related to osseointegrated implants. *One hour per week for one year.*

**PDNT D9784 082. Pain/anxiety control and pharmacology lectures***Professor S. J. Scrivani and staff in cooperation with Divisions of Oral Surgery and Anesthesiology.*

Lectures in the theory and practice of pain and anxiety control, including the use of inhalation and parenteral conscious sedation analgesic techniques, possible complications, and management of emergencies. New course. *Hours to be determined.*

**PDNT D9790 082, D9790 083. Independent study***Professor Papapanou and staff.*

By the commencement of the second year, students are expected to select a topic for independent study, which, under the supervision of a mentor, will lead to their M.S. thesis. Students are required to thoroughly penetrate the background and significance of their research assignment by performing the necessary library studies; carry out the required laboratory or clinical tasks; submit a detailed written report describing their assignment; and present their work in a seminar prior to graduation. *One day per week for two years.*

**POSTDOCTORAL M.S. DEGREE PROGRAM IN PROSTHODONTICS**

The three-year, full time board-qualifying program in prosthodontics leads to an M.S. degree in prosthodontics approved by the Commission on Accreditation and prepares the student for a specialty practice, teaching, and/or research. The program is integrated to include all disciplines, that is, removable prosthodontics, fixed prosthodontics, implant prosthodontics, and maxillofacial prosthetics.

The program includes instruction in basic and applied sciences, as well as advanced theory and practice of prosthodontics and related areas of dentistry, through lecture courses, seminars, reading assignments, laboratory exercises, and clinical practice demonstrations. Emphasis is on diagnosis, treatment planning, and application of treatment modalities.

The student also gains experience in clinical instruction of undergraduate dental students and research. The opportunity to spend a fourth year with a stipend at Columbia and an affiliated institution in maxillofacial prosthetics exists for qualified individuals.

Complete descriptions are given under Courses of Instruction below, except as noted, and for DNSC courses, see "Core Courses" under "Postdoctoral Program in General Dentistry and the Dental Specialties."

**First Year**

PDNT D9732 081	Implantology (see under periodontics)
PROS D9800 081	Clinical practice in prosthodontics
PROS D9808 081	Seminars in prosthodontics
PROS D9813 081	History of prosthodontics and literature review
PROS D9820 081	Prosthodontics treatment planning
PROS D9838 081	Occlusion/instrumentation
PROS D9864 081	Predoctoral prosthodontics instruction
PROS D9890 081	Independent study (thesis)

DNSC D9900 001	Research methodology and biostatistics
DNSC D9903 001	Human development
DNSC D9910 001	Clinical stomatology conferences
DNSC D9911 001	Functional anatomy of the head and neck
DNSC D9913 001	Panoramic radiography
DNSC D9925 001	Oral biology
DNSC D9930 001	Biology of mineralized tissues
DNSC D9935 001	Dental materials
DNSC D9944 001	Clinical practice issues
DNSC D9990 001	Pedagogy of preclinical and clinical teaching

## Second Year

PDNT D9730 082	Interdisciplinary case management (see under periodontics)
PDNT D9780 082	Implantology literature review (see under periodontics)
PROS D9802 082	Clinical practice in prosthodontics
PROS D9810 082	Seminars in prosthodontics
PROS D9815 082	History of prosthodontics and literature review
PROS D9822 082	Prosthodontic treatment planning
PROS D9866 082	Prosthodontics instruction preceptorship
PROS D9891 082	Independent study (thesis)
DNSC D9990 001	Pedagogy of preclinical and clinical teaching

## Third Year

PROS D9804 083	Clinical practice in prosthodontics
PROS D9812 083	Seminars in prosthodontics
PROS D9817 083	History of prosthodontics and literature review
PROS D9824 083	Prosthodontic treatment planning
PROS D9872 083	Occlusion/instrumentation
PROS D9892 083	Independent study (thesis)
DNSC D9990 001	Pedagogy of preclinical and clinical teaching

## Courses of Instruction

### PROS D9800 081, D9802 082, D9804 083.

#### Clinical practice in prosthodontics

*Professor White.*

Supervised clinical experience in diagnosis, treatment planning, and all phases of prosthodontic therapy. *At least six clinic sessions a week each semester.*

### PROS D9808 081, D9810 082, D9812 083.

#### Seminars in prosthodontics

*Professor White.*

A comprehensive discussion of basic and advanced techniques in fixed and removable prosthodontics and maxillo-facial prosthetics. *Three hours per week each semester.*

### PROS D9813 081, D9815 082, D9817 083. History of prosthodontics and literature review

*Professors White, Wright, and staff.*

A series of seminars in which classic prosthodontic literature and articles from current journals are critically analyzed. The objective is to develop habits of critical interpretation and to familiarize the student with past and present prosthodontics issues and concepts. *One hour per week each semester.*

### PROS D9820 081, D9822 082, D9824 083.

#### Prosthodontic treatment planning

*Professors Moran, White, and staff.*

A special effort is made to assimilate the didactic and theoretic aspects of prosthodontics presented in the other seminars and their application to patient diagnosis, treatment, recall, maintenance, and failures. Formal case presentations are made by assigned faculty members and students. *One hour per week each semester.*

### PROS D9838 081, D9872 083.

#### Occlusion/instrumentation

*Professor White.*

A comprehensive review of the basic concepts of occlusion in seminar form to provide a didactic component to augment the students' clinical experience with occlusion. *One two-hour session weekly.*

### PROS D9844. Clinical rotations at Harlem Hospital

*Professors White and Wright.*

Prosthodontic procedures within a hospital dental service emphasizing prosthodontic care of selected patients.

### PROS D9864 081, D9866 082. Predoctoral prosthodontic instruction preceptorship

*Professor Wright and staff.*

Instruction of predoctoral students in clinical prosthodontics to expose the postdoctoral student to a career in teaching. *One hundred sixty (160) clinical hours.*

### PROS D9890 081, D9891 082, D9892 083.

#### Independent study (thesis)

*Professor Wright and Dr. McAlarney.*

An investigation of an approved area of interest in the field of prosthodontics, with the results presented in the form of a written thesis and oral presentation that should be completed and presented at least one month before the end of the program.

# Certificate Program in Dental Assisting

## PHILOSOPHY AND GOALS

The Dental Assistant Program is a one-year program that exists as a joint venture between Columbia University School of Dental and Oral Surgery and Harlem Hospital Dental Service. It was developed, in part, with a grant from the Upper Manhattan Empowerment Zone Development Corporation. The program is strongly committed to the minority neighborhoods in which it is located. The program intends to expand the educational opportunities available to residents of these neighborhoods. We believe that if we provide access to a career in a health profession to qualified minority high school graduates, they will set a valuable example to other residents of the community. They, too, can become part of a respected health care profession. The goals of the program are to:

- Train minority high school graduates from Central Harlem and the Washington Heights/Inwood areas for careers in dental assisting by providing them with the knowledge and skills that enable them to assist effectively in all areas of dentistry.
- Prepare students to successfully pass the Dental Assisting National Board.
- Increase the number of allied dental health workers available for employment in dental facilities and private practices for underserved populations in New York City.
- Provide students with computer skills that will enhance their employment opportunities.
- Provide job placement for graduates of the program.

The curriculum includes fundamental sciences, such as anatomy and physiology, and specialized courses in dental assisting ranging from patient care and infection control to radiography and dental materials, preparations used for patients in dental treatment. Students learn the impact of the health status of the patient on dental care, how to prevent the occurrence of emergencies, and how to recognize and assist in emergencies when they occur.

## COURSES OF INSTRUCTION

### DEA 0200. Dental office management

*Ms. Reneau.*

This course builds on oral and written communication skills and introduces various practice management procedures, including patient reception, purchasing, maintaining, and keeping an inventory of supplies and a filing system; and financial methods, including bookkeeping and banking and maintaining tax records. Students are introduced to the legal and ethical aspects of dentistry including the State Dental Practice Act.

### DEA 0020C. Pre-clinical procedures

*Ms. Reneau.*

An introduction to basic clinical dental assisting skills. Provides a broad background related to the application of skills needed to become a competent certified dental assistant.

### DEA 0300. Dental health education

*Professor Bailey and Mr. Anderson.*

Integrates nutrition into the diagnosis and treatment of dental patients, showing the student the relationship between awareness of nutrition and dental health. Students learn how to assess a patient's diet and lifestyle and the impact they have on the patient's dental health.

### DEA 0800L. Chairside dental assisting

*Ms. Reneau.*

Emphasizes clinical application in chairside assisting. Students gain clinical experience through dental assisting practice assignments at various dental settings. A minimum of 300 hours of clinical experience is required.

### DEA 0850C. Clinical practice I

*Ms. Reneau.*

Students gain additional experience in chairside dental assisting functions. They begin to advance their clinical skills in patient treatment procedures.

### DEA 0851L. Clinical practice II

*Ms. Reneau.*

Students serve an internship with a dental practitioner with whom they obtain experience in all aspects of dental office practice and function as part of a dental health care team.

### DES 1010. Head and neck anatomy

*Professor S.J. Srivani.*

A detailed study of the skeleton, musculature, circulation, and nervous system of the head and neck, emphasizing the structures associated with the oral cavity. Introduces student to microscopic anatomy of the dental tissues.

### DES 1010. General anatomy and physiology

*Professor Khyvert.*

An introductory course designed to introduce the student to the study of the human body as a whole, integrated, functioning organism. Students study the systems, regions, and some of the basic physiological mechanisms that operate in the body.

### DES 1021. Dental anatomy/oral anatomy

*Ms. Reneau.*

A comprehensive introduction to the gross anatomy of the teeth and organs of the oral cavity; related structures; innervations and blood supply.

### DES 1044. Oral pathology

*Professor King.*

Students study general and oral pathological diseases. The course emphasizes diseases related to the oral cavity. It cultivates recognition of normal and abnormal conditions of the oral cavity and surrounding tissues through case presentations and slides.

### DES 1051. Pharmacology and dental emergencies

*Professor King.*

Familiarizes students with basic concepts and considerations in pharmacology. The curriculum includes fundamental sciences, such as anatomy and physiology, and specialized courses in dental assisting ranging from patient care and infection control to radiography and dental materials. Preparations used for patients in dental treatment. Students learn the impact of the health status of the patient in the context of dental care, how to prevent the occurrence of emergencies, and how to recognize and assist in emergencies when they occur.

### DES 1060. Microbiology

*Professor Bailey.*

Familiarizes students with the role of microorganisms in health and disease and introduces students to anatomy and physiology.

### DES 1100C. Dental materials

*Professors Lichtenthal and Phillips.*

An introduction to common dental materials and their physical and chemical properties, manipulation, and uses in dental practice.

### DES 1200C. Radiology I

*Dr. Navedo and Ms. Renau.*

An introduction to the physics and biology of radiation and radiation hygiene, equipment, and materials.

### DES 1201, 1201L. Dental radiology II

*Dr. Bunza.*

Working with manikins in a laboratory and/or radiology clinic, students learn techniques to place film, and expose and process radiographs. Students apply the principles learned in *Radiology I*.





## Registration, Financial Aid, and Other Information

### REGISTRATION

Before attending classes, incoming students must register with the Office of Student Administrative Services during registration period. Incoming students are notified of the date, time, and place through information provided in the admissions packet. Thereafter, registrations are brought forward unless a student has a registration hold, which may be placed by the dean or placed if a student has an outstanding balance. Information concerning registration, holds, and student account status is available on their Web site (<http://www.columbia.edu/cu/students>) as well as in the Office of Student Administrative Services, located in Room 141 of the Black Building. Daily hours are 9:00 a.m. to 4:30 p.m.

All students are asked to give Social Security numbers when registering in the University. Students who do not have Social Security numbers should obtain them from their local Social Security Office well in advance of registration. International students should consult the Immigration Affairs Office (IAO), 650 West 168th Street, Black Building, First Floor, Room 126B (mailing address: Immigration Affairs Office, Box 27, 630 West 168th Street, New York, NY 10032), for further information.

### Immunization Requirements

Columbia University Health Sciences campus policy mandates that all students in the Health Sciences must prove immunity to measles (rubeola), mumps, and rubella (MMR), in order to register for classes. This includes students born before January 1, 1957, and students taking less than 6 credits. The only acceptable proof that you are immune to measles, mumps, and rubella (MMR) is by one of the following: (a) lab reports demonstrating immune titers obtained within five (5) years of the date of registration; (b) written documentation that you received two MMR immunizations (injections) 4 to 6 weeks apart no earlier than September 1, 1997; or (c) coming to our Immunization Office, Tower I, Room 3E, on or before the day of registration to have MMR serologies or immunizations at no cost to you. Your school may require other immunizations (e.g., hepatitis B, varicella) or a skin test for tuberculosis infection. Documentation must be sent to Columbia University Student Health Service-MMR, 60 Haven Avenue, Room 3E, New York, NY 10032.

### Other Courses in the University

Certificate and degree candidates in good standing who are enrolled for a full-time program in the current term may register for one or two courses (except during Summer Session) in any division of the University (excluding Barnard College and Teachers College) without charge by filing a formal change of program application approved by the Associate Dean for Academic Affairs. These forms are then filed in the Office of Student Administrative Services (Black Building, Room 141). Consult the Office of SAS for fall and spring change of program dates.

## GRADING SYSTEM AND REQUIREMENTS FOR PROMOTION AND GRADUATION

### D.D.S. Program

The school grading policy calls for letter grades in all didactic courses in the biomedical sciences and the dental sciences, and in the preclinical laboratory courses; H/P/F for all clinical courses and courses in the behavioral sciences.

There are four standing faculty committees concerned with students' academic performance. These committees are the First-Year Class Committee, the Second-Year Class Committee, the Third-Year Class Committee, and the Fourth-Year Class Committee. These committees meet periodically during each academic year to review student performance and to make decisions related to course failures and to promotions. A student may be admitted to the second, third, or fourth year of the dental curriculum only upon successful completion of all courses and recommendation of the officers of instruction under whom the student has studied during the preceding year. Students are classified for promotion or readmission under the following categories: (1) recommended for advancement; (2) recommended for readmission to the same class; (3) not recommended for advancement or readmission to the same class.

Course failures in all years of the curriculum must be corrected according to the directives of the appropriate class committee. At the discretion of the class committee, in any year of the curriculum, students may be requested to repeat the year or may be dismissed for poor scholarship. Each class committee may direct a student whose performance is marginal to undertake additional work to correct deficiencies and strengthen overall performance in any discipline.

Students are informed in writing of the academic decisions of each class committee. Students have the right to appeal decisions of the committees. A student who wishes to appeal may request that the concerned committee reverse or alter its decision. If the committee reaffirms the original decision, the student may direct an appeal to the Committee on Appeals of the School.

The School of Dental and Oral Surgery reserves the right to dismiss, or to deny admission, registration, readmission, or graduation to, any student who in the judgment of the School is determined to be unsuited to the study or the practice of dentistry.

The degree of Doctor of Dental Surgery (D.D.S.) is awarded upon satisfactory completion of the prescribed curriculum and passing the National Board Part II examinations.

### The Postdoctoral Certificate and M.S. Degree Programs

The following grading system is used: A, excellent; B, good; C, fair; F, failure; P, pass.

To be awarded the certificate of training, a candidate must fulfill the following requirements to the satisfaction of the Postdoctoral Committee. The candidate must: (1) complete the prescribed courses and any required thesis; students wishing to be exempted from any of the prescribed courses may request a placement examination in the discipline involved, and the time made available by



such exemptions will be planned and supervised by the Program Director for productive utilization; (2) pass prescribed written, oral, or practical examinations at the end of the period of residence; (3) attend special courses, when assigned, at hospitals or institutions affiliated with Columbia University but separate from the Medical Center; and (4) satisfy the Postdoctoral Committee that he or she has completed all the specified requirements, both clinical and academic, for the certificate of training. Any postdoctoral student receiving marginal grades in more than one subject in any one academic year may be advanced or promoted only upon special action and recommendation of the Postdoctoral Committee.

## FEES

The following fees are charged for the D.D.S. program and each of the postdoctoral programs. Fees are subject to change at any time at the discretion of the Trustees. University charges such as tuition and fees, residence halls, and board plans are due and payable in full by the date announced before the beginning of each term. The full amount of any charge may be paid when due without penalty, or payment may be made in installments. If installment payments are made, a **FINANCE CHARGE** is assessed on amounts not paid by the due date on the initial bill received prior to registration and thereafter as indicated on subsequent monthly bills. All charges must be paid by the end of the term.

It is the policy of the University to withhold diplomas, certificates, and transcripts until all financial obligations have been met. Candidates for graduation are urged to pay their bills in full at least on month prior to graduation.

In the event a diploma, certificate, or transcript is withheld because of an unpaid bill, a student will be

**required** to use a certified check, money order, or cash to release any of the aforementioned documents.

## Tuition and Fees

Current tuition and fee information is available online at the Student Services Web site at <http://www.columbia.edu/cu/students> or from the Office of Student Financial Planning's Web site: <http://cpmcnet.columbia.edu/student/finaid/>.

## Health Service and Hospitalization Insurance Fee

The student health service fee contributes to the cost of operating the Student Health Service. The hospital insurance fee pays the annual premium of the Empire Blue Cross hospitalization coverage. All full-time students must enroll in the Student Health Service and have hospitalization coverage. Students with comparable insurance coverage may waive the hospitalization premium fee only, but proof of comparable coverage must be shown at the time of registration. Although fees for the Student Health Service are assessed automatically, new and returning students must complete enrollment paperwork annually. Waivers for hospital insurance assessment also must be requested annually.

New students must provide proof of immunity to measles, mumps, and rubella or submit to immunization on or before registering for classes.

## Application Fee

Application for admission

\$60

## Late Registration Fees

During late registration	\$ 50
After late registration	\$100

## Special Fee

International Student Charge	\$100
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## Fees for Repeated Courses

A student who is required to repeat the work for any one year must pay the full tuition and fees. In some cases, a reduced tuition rate will be charged for modified coursework.

## Withdrawal and Adjustment of Fees

The University has a pro rata refund policy for students who do not register or who withdraw or otherwise fail to complete an enrollment period. Refunds are a percentage of charges (including tuition, dining, and housing) assessed the student based on the date of the student's last day of attendance (separation) as reported by the dean of the student's school.

All students will be charged a withdrawal fee of \$75. A refund calculation will be based on the last day of attendance; however, a student may be charged for services (e.g., housing, dining) utilized after the last day of attendance. These charges cannot be paid with Title IV or Title VII funds.

Certain fees are not refundable; fees not subject to refund include: health service, medical insurance/Blue Cross, catastrophic insurance, course-related fees (labs, etc.), dental kit, microscope, case books, disability insurance, malpractice insurance, materials fee, orientation fee, international services charge, late registration fee, late payment fee, finance charges, computer fee, withdrawal fee.

Refunds will be credited in the following order: Federal Unsubsidized Stafford Loans, Federal Stafford Loans, Federal Perkins Loan, other Title IV programs, Title VII funds, and state, private, and institutional funds. Any remaining credit balance will be refunded to the student upon written request.

The refund percentage is as follows (prorated for calendars of different durations):

1st week	100% refund
2nd week	90%
3rd week	80%
4th week	80%
5th week	70%
6th week	60%
7th week	60%
8th week	50%
9th week	40%
After 9th week	—

## Application or Renewal of Application for Degrees or Certificates

Degrees and certificates are awarded four times a year—in October, February, May, and June. A candidate for any Columbia degree or certificate must file an application with the Office of Student Administrative Services, Room 141 Black Building. The last day to file for an October degree is August 1; for February degree, December 1; and

for a May or June degree, February 1. (When the application date occurs on a Saturday or Sunday, the deadline becomes the next business day.) No name changes will be accepted after the application deadline. Fourth-year students usually apply during their last registration.

If the student fails to earn the degree by the conferral date for which he or she has made application, the student may renew the application for the next conferral date.

## Diplomas

There is no charge for diploma preparation except in the following instances. A \$100 fee is imposed for processing replacement diplomas after a student has graduated. Applications for replacement diplomas may be requested by calling the Graduation and Degree Audit at the Morning-side campus, (212) 854-8319.

## Name Changes

Students may change their name of record while currently enrolled in the University. There is no charge for this service. After graduation and/or attaining non-current status, students' names become a permanent part of their historic academic record and can no longer be changed. Questions about name changes should be directed to the Registrar's Services, 141 Black Building.

## TRANSCRIPTS AND CERTIFICATIONS

The amended Family Educational Rights and Privacy Act (FERPA) of 1974 prohibits release of educational records without the written consent of the student (for certain exceptions and further restrictions, consult *FACETS*, the University student handbook). You may obtain an official transcript of your academic record at Columbia University by writing to: Student Administrative Services, Columbia University, Room 141, Black Building, Unit 45, 650 West 168th Street, New York, NY 10032, Attention: Transcripts.

Please include the following information with your request: current and former names; Social Security number; schools attended and dates of attendance; degrees awarded and dates awarded; number of transcripts desired and complete address for each; your current address and telephone number; and your signature authorizing the release of your transcript. You may also order transcripts in person at Room 141 of the Black Building on the Health Sciences campus (9 a.m.–4:30 p.m., Monday–Friday). Currently enrolled students may order transcripts for themselves and for colleges and universities via the Student Services page on the World Wide Web at <http://www.columbia.edu/cu/students/>. There is no charge for issuing transcripts; however, all students pay a one-time transcript fee of \$45 upon their first registration at the University. The normal processing time for transcripts is two to three business days. If you mail in your request for a transcript, you should allow several additional days for delivery to and from the University.

You may order certifications of your enrollment and degrees via mail, in person, or on the Student Services page on the Web as described above. When requesting a certification by mail, include the notation "Attention: Certifications" on

your envelope. Certifications are provided while you wait if you come to the Black Building to request them. There is no charge for certifications.

**ESTIMATED EXPENSES** *These are estimated expenses for the 2002–03 academic year.*

### D.D.S. Program

**Books.** The approximate cost of books will be: in the first year, \$1,310; in the second year, \$1,180; in the third year, \$400; in the fourth year, \$200. Book lists are posted for each class during registration week. Books may be purchased from the Medical Center Bookstore.

**Instruments and Supplies.** Each student must purchase from the University a package of instruments necessary for preclinical and clinical dental instruction. The estimated cost of these instruments for students entering in September 2001 was approximately \$12,036, and arrangements have been made to spread the \$12,036 expenditure over the four-year period. A charge is made for loss, breakage, and abnormal wear.

**Microscopes.** During the first year, the School provides microscopes; the rental fee is included in the Instrument and Supplies charge mentioned above.

**Lockers.** Each entering student is assigned a microscope locker located on the Presbyterian Hospital (PH) 17th floor—the Learning Center; combination numbers for the microscope lockers are assigned by the Learning Center manager.

### Postdoctoral Certificate and M.S. Programs

Since the cost of tuition, books, and instruments may fluctuate, please contact the Office of the Dean for Postdoctoral Affairs at (212) 305-2425 for information on current tuition and fees.

## FINANCIAL AID

The Office of Student Financial Planning administers financial aid for the College of Physicians and Surgeons and the School of Dental and Oral Surgery. You can visit their Web site at <http://cpmcnet.columbia.edu/student/finaid>.

Each class is assigned to a Financial Aid Officer who will determine need and financial aid packages and will work closely with that class throughout dental school. All of our staff is prepared to answer routine questions. Financial aid officers have posted walk-in hours each week to handle questions that can be quickly resolved. Appointments can be made when a longer conference is needed.

Financial aid is any grant, scholarship, or loan offered for the express purpose of helping a student meet educational expenses. Such aid is usually provided by or through the School, federal and state agencies, foundations or corporations, and banks.

**Grants/scholarships** are “gift” assistance and need not be repaid, although they may carry certain provisions to which one must adhere. **Loans** are borrowed monies,

offered at various interest rates, which are repaid over an extended period after the student graduates or leaves the institution.

The basic premise of our financial aid program is that the primary responsibility to pay for dental school rests with students and their families, to the extent that they are determined able to do so. While the Office of Student Financial Planning will do everything possible to assist, the School should be expected to assist only when the family is unable to meet the full cost of attendance. **Since the School has very limited need-based funds available for loans and grants, students who need assistance will have to finance most of their dental education with student loans.**

Careful consideration of the impact of large educational debt is critical, and our financial aid officers are available to counsel students on the implications.

An international student in the United States with an F1 or F2 student visa or with a J1 or J2 exchange visitor visa **cannot receive need-based student aid from federal, state, or SDOS sources.** International students who acquire permanent resident status prior to graduation will become eligible for external state and federal assistance, but not for SDOS need-based aid.

### School-Administered Scholarships and Grants

These scholarships and grants are awarded to needy students according to the packaging model described in our *Financial Aid Handbook*, which is updated every year. Of the \$1,019,400 awarded in 2001–02, 70 percent came from SDOS, and 30 percent came from federal sources.

### Federal Program from HHS

Based on Congressional appropriation, the Department of Health and Human Services (HHS) makes awards to participating dental schools for one need-based program.

### Scholarships for Disadvantaged Students (SDS)

These limited funds are targeted for students from disadvantaged backgrounds who have exceptional financial need and meet low-income level thresholds established by HHS.

### SDOS Grants

These grants range from \$1,000 to \$6,000. Most of the School's grant funds are dedicated to this support of needy students.

**Named Need-Based Grants.** Named grants in varying amounts exist for currently enrolled students. They include scholarships such as the Fermi Award, the Gies Research Scholarship, the Minervini Scholarship, the Percy T. Phillips Scholarships, the Abraham and Martha Barnett Scholarship Fund, and others.

### ACADEMIC SCHOLARSHIPS

A number of merit-based scholarships are awarded annually by the School of Dental and Oral Surgery and may become part of a student's financial aid package. The following are examples of such scholarships:

**Dean's Academic Scholarships:** Two or three incoming first-year students receive approximately **one-half tuition** in recognition of past academic performance and potential for unusual excellence in the profession. These scholarships are renewed for **four years** provided satisfactory academic progress and professional demeanor are maintained.

**Dean's Honor Scholars:** Five students with the highest academic achievement at the conclusion of Year I each receive a \$1,000 scholarship toward Year II costs in recognition of academic excellence.

The **William J. Gies Foundation** funds the William J. Gies Fellowship for the Advancement of Dentistry. It is awarded yearly to the second-year student judged by the Research Committee to have the highest potential for a research career.

SDOS sponsors a number of **Research and Teaching Assistantships** for those who are interested and have the ability. These competitive positions provide \$2,000 in tuition exemption and a stipend of about \$1,000. The number of slots and level of tuition exemption and stipends may vary considerably from year to year.

The **Dr. Milton G. Schlesinger Award for Excellence in Research** is given annually to a student who has completed the third year with academic excellence and has meritorious research, as determined by the Research Committee of the School, in biological or clinical dental science.

The **Van Woert Award** recognizes the student with the highest academic achievement at the end of the third year.

### *Interschool Scholarships*

A number of small scholarships from the University are available to students who meet specific criteria. Contact the Office of Student Financial Planning for a complete list of these scholarships.

**New York State Tuition Assistance Program (TAP).** To qualify, an applicant must be a resident of New York State twelve months prior to application for funds. As of this date, awards range from a minimum of \$75 to a maximum of \$550 per academic year. Applications may be obtained from our office or from the New York State Higher Education Services Corporation, 99 Washington Avenue, Albany, NY 12255. Students from other states should investigate the availability of scholarship programs in their home state. The School assumes that all eligible students will apply for grants that are administered by their states of legal residence.

A limited number of **Armed Forces Health Professions Scholarships** are available. These scholarships provide full payment of direct educational costs (tuition, fees, books, etc.) and a stipend for living expenses. Each carries a service commitment. Students interested in applying for these programs are encouraged to contact a recruitment office in their area.

New scholarships may be available from the **National Health Service Corps Scholarship Program**. Priority has previously been given to recipients who demonstrate exceptional financial need.

The **New York State Regents Health Care Scholarships for Medicine and Dentistry** provide awards of up

to \$10,000 per year. Applicants must be legal residents of New York State and be enrolled in a dental school or be candidates for admission to a dental school. Applicants must agree to practice dentistry in an area of New York State designated as a shortage area. Applications may be obtained from:

New York State Education Department  
Office of K-16 Initiatives and Access Programs  
Scholarship Processing Unit, Room 1078 EBA  
Albany, NY 12234  
Telephone: (518) 486-1319

We strongly urge you to seek loans from family members and from other private sources, since more favorable interest rates and payment schedules may be possible.

### **Creditworthiness**

You should be aware that some lending agencies use creditworthiness as one of the criteria for determining eligibility for loans. Therefore, if you have a poor credit rating, it is imperative that you rectify past problems before matriculation. This is particularly true if you will be borrowing in excess of the maximum available from the Federal Stafford Loan Program. **The School cannot assume financial responsibility if you are denied access to loans because of bad consumer credit or problems with prior educational loans.**

In addition, certain "alternative" loans (loans that accrue interest while you are in school) may require credit-worthy co-makers. They may apply two tests before approving a co-maker: (1) a good credit rating and (2) an appropriate debt-to-income ratio that would lead a lender to assume that if called upon, your co-maker could afford to repay the loan. (Co-makers are only called upon for repayment if you do not repay.)

### **Columbia University (CU) Loans**

By filing the FAFSA (Free Application for Financial Student Assistance) and the School's financial aid application, you are given consideration for all loans awarded directly by the School: Federal Perkins Loans, Health Professions Student Loans (HPSL), Loans for Disadvantaged Students (LDS), George W. Hindels Student Loan Fund, and other named CU loans.

The **Federal Perkins Loan** program provides long-term, low-interest (5 percent) loans to students demonstrating exceptional need as defined by the institution. The aggregate amount of Perkins funds a graduate student may have outstanding from all undergraduate and graduate institutions is \$40,000; the annual maximum is \$6,000.

The **Health Professions Student Loan (HPSL)** program provides long-term, low-interest (5 percent) loans to students with exceptional financial need. Repayment of HPSL loans may be deferred until the borrower has completed "advanced professional training." This includes residency, full-time postdoctoral programs (e.g., periodontics, prosthodontics), and up to two years during a fellowship. Principal and interest are repayable over a ten-year period.

The **Loans for Disadvantaged Students (LDS)** program also provides long-term, low interest loans to stu-

dents from disadvantaged backgrounds with financial need. The interest rate (5 percent) and other provisions are essentially the same as those for the Health Professions Student Loan program described above.

The **George W. Hindels Student Loan Fund** was established to offset the burden of "high-interest" loans to students who demonstrate financial need. As with the HPSL, repayment of this loan may be deferred until the borrower has completed advanced professional training. No interest is assessed during in-school and deferment periods. Following a six-month grace period and any subsequent deferments, principal and interest (5 percent) are repayable over a maximum of ten years.

**Named Columbia University Loans** are low-interest (5 to 9 percent, but most are 9 percent) loans available to students who demonstrate financial need. Repayment terms vary with each fund. Most require repayment to commence six or nine months after graduation with a maximum repayment period of ten years. In rare cases CU loans will require a co-maker. No interest is assessed during in-school and deferment periods.

## External Loans

### *Federal Stafford Student Loans (Subsidized and Unsubsidized)*

The Federal Stafford Student Loan Program is designed to make low-interest loans available to students to help them meet their educational expenses. You may qualify for a Subsidized Federal Stafford Loan, which is based on financial need. If you qualify for a Subsidized Federal Stafford Loan, the federal government pays the interest on the loan to the lender (i.e., "subsidizes" it) while you are in school or in deferment. You are responsible for interest that accrues from disbursement on the Unsubsidized Stafford, although repayment on both types will not begin until after graduation.

### *Alternative Loans (Loan terms are indicated for the 2002–03 academic year and are subject to change.)*

We refer to this next group of loans as "alternative loans" because they are in addition to the first part of the SDOS loan package—the maximum in Federal Subsidized and Unsubsidized Stafford Loans, because you are responsible for interest that begins to accrue immediately upon disbursement (no payments are required while you are in school), and because they have variable interest rates, but without any cap, or upper limit. These loans can be used to reach the loan threshold, to replace the "calculated parental contribution," or to cover allowable expenses that exceed the standard budget. If you need an "alternative" loan, your Financial Aid Officer will recommend the best loan available at the time you apply.

### *Alternative DEAL Loans (A-DEAL)*

This plan, offered by the Key Education Resource Group, is available to creditworthy U.S. citizens and permanent residents; permanent residents are required to obtain a creditworthy cosigner who is a U.S. citizen or national.

The loan carries a variable interest rate based on the three-month LIBOR (London Interbank Offered Rates) plus 2.30% prior to repayment, plus 2%, 2.25%, or 2.70% during repayment, with a cap of 18%. Interest begins to accrue immediately and is capitalized at repayment. Repayment begins two years after graduation.

### *Columbia Dental ACCESS Loan Program*

This credit-based loan offered by ACCESS Group to U.S. citizens and permanent residents lets you borrow up to the cost of education annually on your own signature with flexible repayment terms of up to twenty years. No guarantee fee will be deducted from the loan check at disbursement, but 6.9 percent will be added to the principal of the loan at repayment. If you have a co-borrower, a guarantee fee of 5 percent is assessed only once, at the time the loan is disbursed. No payments are due while you are in school or during the nine-month grace period. You may receive up to two years deferment if enrolled in a dental residency or postgraduate program, and there is no penalty for early repayment. Deferred interest will be capitalized (added to the principal) upon graduation and again immediately prior to repayment.

### *CitiAssist for Medical Students (This program is also open to dental students.)*

This credit-based loan offered by Citibank lets you borrow up to the cost of education annually on your own signature with flexible repayment terms of up to twenty years. You do not have to be a Citibank customer to qualify. The maximum lifetime limit is \$190,000. There are no guarantee or origination fees. No payments are due while you are in school or during the six-month grace period. You may receive up to four years deferment or postponement of repayment for your internship or residency, and there is no penalty for early repayment. Deferred interest will be capitalized (added to the principal) after graduation plus residency deferment plus grace period.

### *The Columbia International ACCESS Loan Program*

This credit-based loan is offered by the ACCESS Group for international students with credit-worthy co-borrowers who are U.S. citizens or permanent residents. You may borrow up to the cost of education annually with flexible repayment terms of up to twenty years. A guarantee fee of 9 percent of the total amount borrowed will be assessed at repayment. No payments are due while you are in school or during the nine-month grace period. Loans made beginning with the 1998–99 academic year are eligible for up to three years' deferment if you are enrolled in a dental residency or postdoctoral program. Deferred interest will be capitalized (added to the principal) immediately prior to repayment.

## HONORS

### D.D.S. Program

**Van Woert Award.** A scholarship given to the senior dental student, at the beginning of the year, who has high scholastic attainment and personal character as well as need for financial assistance.

**American College of Dentists, New York Section Award.** An award of \$100 and a plaque or scroll. Presented to a third-year student who is a good all-around student, a member of the student section of the American Dental Association, and who exhibits leadership.

**Alpha Omega Scholarship Award.** A plaque presented to the graduating student (not necessarily an Alpha Omega) with the highest scholastic average for the four years of dental studies. First awarded in 1949.

**Psi Omega Fraternity Award.** A plaque presented by the Gamma Lambda Chapter to the graduating student who has displayed exemplary professional conduct.

**Academy of General Dentistry Award.** Awarded to a graduating student who is an outstanding generalist.

**Ella Marie Ewell Medal.** A medal awarded to the graduating student who, in the best judgment of the faculty, has exhibited meritorious service to students, faculty members, and the University.

**Dental Society of the State of New York Award.** Awarded to a graduating student with demonstrated leadership.

**Omicron Kappa Upsilon.** Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity, was chartered in the School of Dental and Oral Surgery in 1934. The purpose of the fraternity is to recognize and honor a maximum of 12 percent of the members of the graduating D.D.S. class on the basis of scholarship, character, and potential for further professional growth and attainments.

*In addition, divisional and departmental awards are given in the following disciplines:*

- Behavioral Science
- Community Health
- Endodontics
- Operative Dentistry
- Oral and Maxillofacial Surgery
- Oral Radiology
- Orthodontics
- Pediatric Dentistry
- Periodontics
- Prosthodontics
- Stomatology
- Pathology—Lester R. Cahn Prize
- Pharmacology—Herbert J. Bartelstone Award

## IMMIGRATION AFFAIRS OFFICE

The staff of the Immigration Affairs Office serves many of the immigration-related needs of students and scholars on the Health Sciences campus. Staff members are available for advising on immigration-related questions. In addition, you should consult the Immigration Affairs Office regarding any

immigration issue that involves Columbia University Health Sciences sponsorship. International students and scholars at the Health Sciences campus may also take advantage of the social, cultural, and informative activities offered by the International Students and Scholars Office (ISSO) on the Morningside campus. You can visit their Web site at <http://www.columbia.edu/cu/isso/>.

## TAX WITHHOLDING FOR NONRESIDENT ALIEN SCHOLARSHIP AND FELLOWSHIP RECIPIENTS

Although there are not many scholarships or fellowships for international students, students should be aware that scholarships and fellowships awarded are subject to taxation and 14 percent federal withholding on the amount in excess of tuition and fees. All teaching and research assistantships are taxable and subject to withholding based on your rate of pay.

Because of legal restrictions, the staff of the Immigration Affairs Office (IAO) is not qualified to answer individual questions from international students regarding their tax liabilities. United States tax law is extremely complex and each student's situation varies. It is the responsibility of each international student at Columbia to understand his or her own tax situation. To assist you in learning about your tax-filing obligations and to provide you with correct and current information, there are annual tax seminars for all international students. Held in February, March, and early April, these programs, on both the Morningside and Health Sciences campuses, are conducted by accountants who specialize in international taxation. If you have questions when it is time to file your tax return, you should plan to attend one of these seminars. Current tax information and forms are available from the Internal Revenue Service (IRS) office at 290 Broadway (Broadway and Duane Street), Fifth Floor, Monday through Friday from 8:00 a.m. to 3:30 p.m. (telephone 1-800-829-1040).

During tax season, forms are available in most post offices and libraries and some banks. Forms are also available at the IAO, the International Student and Scholars Office on the Morningside campus, and the Lehman Library in the International Affairs Building. Publications may be ordered by calling the IRS toll-free at 1-800-829-3676 or downloading from their Web site: [http://www.irs.ustreas.gov/prod/forms\\_pubs/](http://www.irs.ustreas.gov/prod/forms_pubs/).

## LIVING ARRANGEMENTS

The Health Sciences Housing Office, located in Bard Hall/50 Haven Avenue, oversees all housing requests and assignments for single-student and couples campus housing. The goal of the office is to provide on-campus housing for as many incoming students as possible. Although on-campus housing is not guaranteed, every effort is made to provide on-campus housing to students who are coming from outside the metropolitan area. Specific information regarding assignment priorities, facilities, and accommodations is available at: <http://cpmnet.columbia.edu/dept/hshousing/> or by calling the Housing Office at (212) 304-7000. The Off-Campus Housing Resources Center, also located in Bard Hall, is available to assist students who are looking to live in the community. Students can contact the office at (212) 304-5884.

## CAMPUS SAFETY AND SECURITY

At Columbia University, the safety and well-being of our students, faculty, and staff is an important priority. Columbia's campuses and their environs are safe and have a relatively low crime rate for an urban university.

The University is required by federal law to publish an annual security report containing information with respect to campus security policies and statistics on the incidence of certain crimes on and around our campuses. This information is available in *FACETS*, the University student handbook (<http://www.columbia.edu/cu/facets/>), or at the Web site for the United States Department of Education (<http://ope.ed.gov/Security/instDetail.asp?UNITID=190150/>), or by requesting a copy of the report from: Campus Crime Report, Department of Security, Columbia University, 111 Low Library, Mail Code 4301, 535 West 116th Street, New York, NY 10027.

## STUDENT ORGANIZATIONS AND ACTIVITIES

### Student Council

In accordance with the plan for all schools in the University, the students are organized under a Student Government Association. Through this organization the students have representation on the Columbia University Student Council and are eligible for participation in the many activities at the Medical Center and on the Morningside campus.

### The William Jarvie Society

The William Jarvie Society for Dental Research is a dental honor society, membership in which is based on scholarship and interest in dental research, and for which second-, third-, and fourth-year D.D.S. students are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

### The Student Dental Association

The Student Dental Association of Columbia University was established in 1960 to provide a professional and social forum in which D.D.S. candidates participate. The general program of this organization is patterned after the program of local dental societies, in which the graduate dentist contributes to the organized dental profession.

### Postdoctoral Programs

Student organizations in the postdoctoral disciplines are open to membership. The Program Director should be contacted for additional information.

## LICENSE TO PRACTICE DENTISTRY

Successful performances in Parts I and II of the examinations given by the Council of the National Board of Dental Examiners are preliminary requirements for licensure in most states of the United States, including New York.

Those seeking licensure solely in New York State may take the final or clinical examinations offered by the Board of Dental Examiners of the State of New York. Successful completion of these examinations entitles the applicant to licensure, assuming the prerequisites of good moral character, citizenship, or declaration of intention of becoming a citizen are fulfilled. For additional information, request a copy of Handbook 10, *Professional Education*, from the Division of Professional Licensing Services, New York State Department of Education, Albany, NY 12201.

It is advisable, however, that candidates for licensure take the clinical examinations offered by the North East Regional Board of Dental Examiners, the content and format of which are similar to those of New York State. Successful completion of these examinations, together with fulfillment of such minor prerequisites as may be required by individual states, permits licensure in the states of Connecticut, Illinois, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, Ohio, Pennsylvania, Rhode Island, Vermont, and West Virginia, and the District of Columbia, as well as New York State.

Additional information, including applications, format of examinations, and examination schedules, is available from the North East Regional Board of Dental Examiners, 4645 Deane Avenue N.E., Washington, DC 20019.



# Dental and Oral Surgery

## Faculty of Instruction

### Chair

Professor Ira B. Lamster

### COMMUNITY HEALTH

#### Director

Professor Burton Edelstein

#### Kavita P. Ahluwalia

*Assistant Professor of Clinical Dentistry*  
D.D.S., Michigan, 1993; M.P.H., 1994

#### David A. Albert

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B.A., New York University, 1980; D.D.S., 1984;  
M.P.H., Columbia, 1987

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M.P.H., California (Los Angeles), 1986

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Columbia, 1986

#### Rois Bari

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#### Sandra Burkett

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B.S., Marymount Manhattan, 1992; D.D.S., Columbia,  
1997

#### James Crall

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Sc.D., Harvard, 1994

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1970; M.P.H., Michigan, 1972

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1995

#### Jennifer Fuller

*Affiliate Dentist*  
D.D.S., Michigan, 1999

#### Kathleen A. Gallimore

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B.A., State University of New York (Binghamton), 1979;  
D.D.S., Columbia, 1984

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B.S., Providence, 1990; D.D.S., Medical College of  
Virginia School of Dentistry, 1993

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Rochester, 1988

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University of New York (Buffalo), 1986; M.P.H.,  
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M.P.H., Columbia, 1975

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Columbia, 1996

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1995

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*Lecturer in Dentistry*  
D.D.S., Athens, 1953; M.P.H., Columbia, 1960; Ph.D.,  
1976

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B.S., State University of New York (Binghamton), 1989;  
D.D.S., Buffalo, 1993

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D.D.S., New York University, 1984; M.P.H., 1989

**Maritza Reyes***Assistant Clinical Professor of Dentistry*

B.A., Rutgers, 1988; D.D.S., New York University, 1994

**Marguerite Ro***Assistant Professor of Clinical Dentistry*

B.A., Reed, 1990; M.P.H., Johns Hopkins, 1994;

Dr.P.H., 1998

**Donald Sadowsky***Professor of Clinical Dentistry*

D.D.S., New York University, 1954; M.P.H., Columbia, 1971; Ph.D., 1977

**Ronald Salyk***Instructor of Clinical Dentistry*

B.S., City University of New York, 1974; M.S., Fordham, 1981; D.D.S., Columbia, 1988

**Felicia Singletary***Assistant Professor of Clinical Dentistry*

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**Hamad C. Skinner***Assistant Professor of Clinical Dentistry*

B.S., Alcorn State, 1987; D.D.S., Howard, 1994

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B.S., George Washington, 1991; D.D.S., Columbia, 1997

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Professor Gunnar Hasselgren

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B.S., City University of New York, 1955; D.D.S., New York University, 1961

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**Winston Wen-Jong Chen***Assistant Clinical Professor of Dentistry*

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**Michael J. Collura***Instructor*

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**Ron Ganik***Assistant Clinical Professor of Dentistry*

B.S., City University of New York, 1974; D.D.S., Georgetown, 1982

**Fredric E. Goodman***Associate Clinical Professor of Dentistry*

B.A., Hunter, 1958; D.D.S., Temple, 1962

**Albert L. Granger***Assistant Clinical Professor of Dentistry*

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**Stanley M. Kaplan***Adjunct Assistant Professor of Dentistry*

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*Assistant Professor of Clinical Dentistry*  
D.D.S., Perugia (Italy), 1990; M.A., Columbia, 1998

**Lawrence R. Siegel**

*Assistant Clinical Professor of Dentistry*  
B.A., Upsala, 1963; D.D.S. Temple, 1967

**John Lawrence Sopchak**

*Assistant Clinical Professor of Dentistry*  
B.A., Rutgers, 1975; D.D.S., Columbia, 1979

**Jerry Steinberg**

*Assistant Clinical Professor of Dentistry*  
B.A., California State, 1982; D.D.S., California (Los Angeles), 1986

**Julius D. Tarshis**

*Clinical Professor of Dentistry*  
D.D.S., Pennsylvania, 1949

**Constance P. Winslow**

*Assistant Clinical Professor of Dentistry*  
B.A., Pennsylvania, 1967; D.D.S., New York University, 1976

**PEDIATRIC DENTISTRY***Director*

Professor Martin J. Davis

**Sabiya Mir-Amanat**

*Assistant Clinical Professor of Dentistry*  
B.A., Barnard, 1992; D.D.S., Columbia, 1996

**Marshall Jed Best**

*Associate Clinical Professor of Dentistry*  
B.A., Case Western Reserve, 1972; D.D.S., 1979; M.S., Minnesota, 1981

**Irene E. Block**

*Assistant Clinical Professor of Dentistry*  
B.S., New York University, 1980; D.M.D., Fairleigh Dickinson, 1987

**Steven Chussid**

*Associate Professor of Clinical Dentistry*  
B.S., State University of New York (Stony Brook), 1988;  
D.D.S., Buffalo, 1988

**Martin J. Davis***Professor of Clinical Dentistry*

B.A., Yale, 1970; D.D.S., Columbia, 1974

**Renee Dobkin-Wild***Assistant Clinical Professor of Dentistry*B.A., State University of New York (Stony Brook), 1986;  
D.D.S., State University of New York (Buffalo), 1992**Stephen A. Festa***Adjunct Assistant Professor of Dentistry*

D.D.S., 1979

**Ann Guerra***Assistant Clinical Professor of Dentistry*B.S., State University of New York (Stony Brook), 1983;  
D.D.S., 1987**Heidi L. Hills***Associate Professor of Clinical Dentistry*

B.A., Rutgers, 1975; D.M.D., Tufts, 1978

**Lois A. Jackson***Assistant Clinical Professor of Dentistry*

A.B., Barnard, 1973; D.D.S., Columbia, 1980

**Barry L. Jacobson***Assistant Clinical Professor of Dentistry*

B.A., Columbia, 1990; D.M.D., UMDNJ, 1994

**Margot H. Jaffe***Assistant Clinical Professor of Dentistry*

B.S., Trinity, 1976; D.D.S., Columbia, 1980

**George C. Kiriakopoulos***Clinical Professor of Dentistry*A.A., Paris, 1946; B.A., Brooklyn, 1950; D.D.S.,  
Columbia, 1954**Kavita Kohli***Associate Professor of Clinical Dentistry*B.D.S., University of Bombay, 1990; D.D.S., Nebraska,  
1996**Aaron Manuella***Instructor of Dentistry*

B.S., Albright, 1982; D.M.D., Fairleigh Dickinson, 1986

**Joseph M. McManus Jr.***Associate Clinical Professor of Dentistry*

A.B., Holy Cross, 1968; D.M.D., Pennsylvania, 1972

**Guy D. Metcalf Jr.***Associate Clinical Professor of Dentistry*

A.B., Clark, 1970; D.D.S., Columbia, 1975

**Oscar Padilla***Assistant Professor of Clinical Dentistry*

B.A., Fordham, 1990; D.D.S., Columbia, 1995

**Argiro Papandrikos***Assistant Clinical Professor of Dentistry*B.A., New York University, 1993; D.D.S., Columbia,  
1998**Purnima Rathi-Hernandez***Assistant Clinical Professor of Dentistry*B.D.S., Nair Hospital Dental, 1986; M.A., Columbia,  
1990; D.D.S., 1992**Jolanta Sikora***Assistant Clinical Professor of Dentistry*

B.A., Boston, 1983; D.D.S., Columbia, 1989

**Edward M. Sonnenberg***Associate Clinical Professor of Dentistry*B.A., New York University, 1968; D.D.S., Columbia,  
1972**Patricia B. Sioson-Maser***Assistant Clinical Professor of Dentistry*

D.D.S., Marquette, 1993

**Evelyn R. Tejeda***Assistant Professor of Clinical Dentistry*

B.S., Iona, 1988; D.M.D., Connecticut, 1994

**Wayne Eric Turk***Assistant Clinical Professor of Dentistry*B.A., Fairleigh Dickinson, 1978; D.M.D., UMDNJ,  
1982**Daniel Lee Zedeker***Assistant Clinical Professor of Dentistry*

B.S., Florida State, 1979; D.D.S., Columbia, 1983

**PERIODONTICS***Director*

Professor Panos Papapanou

**Michael Bolden***Assistant Clinical Professor of Dentistry*

B.S., Boston, 1981; D.D.S., Howard, 1986

**Gregg A. Caserta***Assistant Clinical Professor of Dentistry*

B.S., Trinity, 1982; D.D.S., Columbia, 1986

**Richard P. Diamond***Assistant Professor of Clinical Dentistry*B.S., Newark, 1964; D.M.D., New Jersey College of  
Dentistry, 1972; M.P.H., Columbia, 1998**Steven P. Engebretson***Assistant Professor of Dentistry*B.A., New York University, 1992; D.M.D., Harvard,  
1995; M.S., Columbia, 1998**James B. Fine***Associate Professor of Clinical Dentistry*B.A., Johns Hopkins, 1979; D.M.D., Tufts University,  
1982**Allan J. Formicola***Professor of Dentistry*

D.D.S., Georgetown, 1963; M.S., 1965

**Steven I. Gold***Clinical Professor of Dentistry*

A.B., Colgate, 1962; D.D.S., New York University, 1966

**Robert Gottsegen***Special Lecture/Professor Emeritus*

A.B., Michigan, 1939; D.D.S., Columbia, 1943

**Takayo Hatakayma***Assistant Clinical Professor of Dentistry*D.D.S., Nippon Dental University Tokyo, 1975;  
D.M.D., Boston, 1989

**Elizabeth Hoang***Instructor of Clinical Dentistry*

B.S., California State (Los Angeles), 1992; D.M.D., Tufts, 1996; M.S., Columbia, 1999

**Denise R. How***Assistant Professor of Clinical Dentistry*

D.M.D., Philippines, 1986; D.D.S., Columbia, 1991

**Biagio A. Iannace***Instructor of Clinical Dentistry*

B.A., Fordham, 1988; D.D.S., Columbia, 1993; M.S., 1997

**Paul R. Kamen***Associate Professor of Clinical Dentistry*

B.A., State University of New York (Stony Brook), 1968; D.D.S., Columbia, 1975

**Susan Karabin***Associate Clinical Professor of Dentistry*

B.A., Lehman, 1977; D.D.S., Columbia, 1981

**Eliasz Kaufman***Assistant Professor of Clinical Dentistry*

B.Sc., Tel Aviv, 1987; D.M.D., 1990; M.S., Columbia, 1999

**Hiroshi Kimura***Instructor of Clinical Dentistry*

B.A., Boston, 1989; D.M.D., Tufts, 1993

**Shari Brem Klein***Assistant Professor of Clinical Dentistry*

B.S., Barnard, 1980; M.S., Columbia, 1981; D.M.D., Fairleigh Dickinson, 1985; M.Sc., Boston, 1988

**Evanthia Lalla***Assistant Professor of Dentistry*

D.D.S., Aristotle (Thessaloniki), 1993; M.S., Columbia, 1997; D.D.S., Columbia, 2000

**Ira B. Lamster***Professor of Dentistry*

B.A., Queens, 1971; S.M., Chicago, 1972; D.D.S., State University of New York (Stony Brook), 1977; M.M.Sc., Harvard, 1980

**Laureen Langer***Associate Clinical Professor of Dentistry*

B.S., Manhattanville, 1978; D.D.S., Columbia, 1982

**Maura Levine***Assistant Clinical Professor of Dentistry*

B.A., New York University, 1970; D.D.S., Columbia, 1984

**Tzong-Hann Lin***Instructor of Clinical Dentistry*

D.D.S., Cheng-Shan Medical/Dental, 1988

**Victor Sow-Cheng Lin***Assistant Clinical Professor of Dentistry*

B.A., Taipei Medical, 1974; D.M.D., 1978

**Christopher J. LoFrisco***Instructor of Clinical Dentistry*

B.A., New College of University of South Florida, 1983; D.M.D., Washington, 1990

**Daniel E. Macdonald***Assistant Clinical Professor of Dentistry*

B.A., Connecticut College, 1980; D.M.D., Tufts, 1983; M.Sc.D., Boston, 1986

**Patricia Marrone***Instructor of Clinical Dentistry*

B.S., Fordham, 1982; D.M.D., Fairleigh Dickinson, 1986; M.S., Columbia, 1997

**Rakhi S. Morton***Instructor of Clinical Dentistry*

B.S., State University of New York (Binghamton), 1992; D.D.S., Columbia, 1997; M.S., Columbia, 2000

**Harvey S. Nisselson***Associate Clinical Professor of Dentistry*

B.S., Brooklyn, 1968; D.D.S., Columbia, 1972

**Panos Papapanou***Associate Professor of Dentistry*

D.D.S., Athens, Greece, 1984; Ph.D., Göteborg, Sweden, 1989

**David Pitman***Associate Clinical Professor of Dentistry*

B.A., Pennsylvania, 1981; D.M.D., 1986

**Jay Rothschild***Assistant Clinical Professor of Dentistry*

B.A., State University of New York (Stony Brook), 1957; D.D.S., New York University, 1961

**Alan Rothstein***Assistant Professor of Clinical Dentistry*

B.A., State University of New York (Binghamton), 1986; D.D.S., Columbia, 1990

**Michael B. Savin***Associate Clinical Professor of Dentistry*

B.A., Rochester, 1961; D.M.D., Pennsylvania, 1965

**Murray Schwartz***Clinical Professor of Dentistry*

B.A., New York University, 1950; D.D.S., Columbia, 1953

**Paul Tannenbaum***Clinical Professor of Dentistry*

B.S., College of the City of New York, 1957; D.D.S., Columbia, 1961

**Peter D. Wang***Associate Clinical Professor of Dentistry*

B.M.D., Taipei Medical, 1978; M.S., Columbia, 1983; D.D.S., 1985

**David Weinstein***Instructor of Clinical Dentistry*

B.A., Washington, 1988; D.M.D., Pennsylvania, 1992

**Jean S. Weng***Instructor of Clinical Dentistry*

B.A., Boston, 1987; D.D.S., Columbia, 1991

**Theodore West***Clinical Professor of Dentistry*

D.D.S., Pennsylvania, 1958; M.S.D., 1961

**Mariam Wozniak***Instructor of Clinical Dentistry*

B.S., Northwestern, 1984; D.D.S., Tufts, 1988

**Michael S. Young***Instructor of Clinical Dentistry*

B.S., Albany, 1992; D.D.S., Columbia, 1996; M.S., 1999

**PROSTHODONTICS***Director*

Professor Robert F. Wright Jr.

**James Abjanich***Assistant Clinical Professor of Dentistry*

B.A., State University of New York (Stony Brook), 1979; D.D.S., Columbia, 1983

**Carlos Alfonso***Assistant Professor of Clinical Dentistry*

B.S., F.R., Pape (Dominican Republic), 1982; D.D.S., New York University, 1993; M.S., Columbia, 1999

**Eric S. Asher***Associate in Clinical Dentistry*

B.A., Minnesota, 1991; M.A., Illinois, 1995

**Bruce W. Bitzer***Assistant Clinical Professor of Dentistry*

B.S., Alabama, 1982; D.M.D., Fairleigh Dickinson, 1986

**Saida Caicedo***Associate in Clinical Dentistry*

A.A.S., New York City Technical, 1997

**John H. Evans***Assistant Professor of Clinical Dentistry*

B.A., Baruch, 1979; D.D.S., Howard, 1983

**Stanley P. Freeman***Clinical Professor of Dentistry*

B.A., New York University, 1957; D.D.S., McGill, 1961

**Vladimir V. Frias***Assistant Professor of Clinical Dentistry*

B.D.S., Gao University (India), 1995; M.S., Columbia, 2000

**Paul W. Galitsis***Assistant Clinical Professor of Dentistry*

B.S., Fairleigh Dickinson, 1982; D.M.D., 1986

**Joel Goldin***Clinical Professor of Dentistry*

B.A., Amherst, 1959; D.M.D., Harvard, 1963

**Charles F. Grannum***Assistant Clinical Professor of Dentistry*

B.A., Pennsylvania, 1981; D.M.D., Fairleigh Dickinson, 1985

**Alvin J. Grayson***Clinical Professor of Dentistry*

B.S., Indiana, 1949; D.D.S., 1952

**Steven T. Hahn***Assistant Professor of Clinical Dentistry*

B.S., Valparaiso, 1989; D.M.D.; Boston, 1994; M.S., Columbia, 1998

**Chiu-Jen Hsu***Assistant Professor of Clinical Dentistry*

B.S., China Medical College School of Dentistry (Taiwan), 1988; D.D.S., New York University, 1993

**Michael L. Huband***Assistant Clinical Professor of Dentistry*

B.S., Louisiana State University, 1984; D.D.S., Medical College of Virginia, 1993

**Steven R. Isaacson***Associate Professor of Clinical Radiation Oncology and Clinical Otolaryngology/Head and Neck Surgery (in Dentistry)*

B.S., Pennsylvania State, 1969; M.D., Jefferson Medical, 1973

**Wook-Dong Kim***Visiting Assistant Professor of Dentistry*

D.D.S., Seoul, 1985

**Eugene P. LaSota***Clinical Professor of Dentistry*

B.A., Hofstra, 1957; D.D.S., Columbia, 1961

**Yong-Sik Lee***Visiting Assistant Professor*

D.D.S., Seoul, 1982

**John J. Lucca***Special Lecturer/Professor Emeritus*

A.B., New York University, 1941; D.D.S., Columbia, 1947

**Mona E. McAlarney***Research Scientist/Lecturer*

B.S., Columbia, 1980; M.S., 1982; Ph.D., 1989

**Robert D. Miner***Associate Clinical Professor of Dentistry*

B.S., Denison, 1962; D.D.S., Columbia, 1967

**Hong-Seok Moon***Visiting Assistant Professor of Dentistry*

D.D.S., Yonsei, 1989; M.S., Columbia, 1997

**Dennis N. Morea***Associate Clinical Professor of Dentistry*

B.S., Fordham, 1966; D.D.S., Columbia, 1970

**Sung-Ook Oh***Visiting Assistant Professor of Dentistry*

D.D.S., Seoul National, 1982

**Devin J. Okay***Assistant Professor of Clinical Dentistry*

B.S., State University of New York (Albany), 1986; D.D.S., Columbia, 1990

**James R. Olivari***Instructor of Clinical Dentistry*

B.S., Fairleigh Dickinson, 1981; D.M.D., 1985

**Vincent Petrazzuolo***Assistant Clinical Professor of Dentistry*

B.S., Long Island, 1970; D.D.S., Maryland, 1974

**Constance B. Phillips***Associate Professor of Clinical Dentistry*

B.A., Temple, 1971; D.D.S., Howard, 1976

**John D. Piro***Associate Clinical Professor of Dentistry*

B.S., Fordham, 1943; D.D.S., Columbia, 1946

**Jason J. Psillakis***Assistant Professor of Clinical Dentistry*

B.S., Rutgers, 1990; D.D.S., Columbia, 1994; M.S., 1999

**Harvey A. Quinton***Assistant Clinical Professor of Dentistry*

D.D.S., Howard, 1978

**Lester E. Rosenthal***Clinical Professor of Dentistry*

A.B., Hofstra, 1948; D.D.S., Columbia, 1953

**Louis I. Rubins***Clinical Professor of Dentistry*

B.S., Queens (New York), 1956; D.D.S., Columbia, 1960

**Gerald F. Sabol***Associate Clinical Professor of Dentistry*

B.S., Fairfield, 1965; D.D.S., Maryland, 1970

**John M. Scarola***Clinical Professor of Dentistry*

B.S., Fordham, 1956; D.D.S., Columbia, 1960

**James W. Schweiger***Professor of Clinical Dentistry*

D.D.S., Iowa, 1954; M.S., 1957

**Clinton E. Spicer***Assistant Professor of Clinical Dentistry*

B.S., West Indies, 1980; M.A., Brooklyn, 1984; D.D.S., New York University, 1991

**Dante M. Torrese***Assistant Clinical Professor of Dentistry*

B.S., Manhattan, 1971; D.D.S., Columbia, 1975

**Ennio L. Uccellani***Special Lecturer/Professor Emeritus*

B.S., College of the City of New York, 1946; D.D.S., Columbia, 1948

**George Shelby White***Associate Professor of Clinical Dentistry*

B.A., Hampton Institute, 1972; D.D.S., New York University, 1975

**Michael Woloch***Instructor of Clinical Dentistry*

D.D.S., New York University, 1979

**Robert F. Wright***Professor of Clinical Dentistry*

B.S., Memphis, 1977; D.D.S., Tennessee, 1982

**Soon-Ho Yim***Visiting Assistant Professor of Dentistry*

D.D.S., Seoul National, 1979

**Jerome A. Zane***Associate Clinical Professor of Dentistry*

D.D.S., Columbia, 1943

## The Faculty of the College of Physicians and Surgeons

Responsible for the Biomedical Sciences

**Richard T. Ambron**

*Professor of Anatomy and Cell Biology*

B.S., Villanova, 1965; Ph.D., Temple, 1971

**Ernest W. April**

*Associate Professor of Anatomy and Cell Biology*

B.S., Tufts, 1961; Ph.D., Columbia, 1969

**Robert E. Canfield**

*Professor of Medicine*

B.S., Lehigh, 1952; M.D., Rochester, 1957

**Marc L. Dickstein**

*Assistant Professor of Anesthesiology*

B.A., Pennsylvania, 1983; M.D., Columbia, 1987

**Thomas J. Garrett**

*Professor of Clinical Medicine*

M.D., Queen's (Canada), 1971

**Daniel J. Goldberg**

*Professor of Pharmacology*

Ph.D., Yale, 1974

**Jay Lefkowitz**

*Professor of Clinical Pathology*

B.A., Clark, 1972; M.D., Columbia, 1976

**Katherine G. Nickerson**

*Associate Professor of Clinical Medicine*

M.D., California (San Francisco), 1981

**Liza A. Pon**

*Associate Professor of Anatomy and Cell Biology*

B.A., California, 1981; Ph.D., Tufts, 1986

**Alice S. Prince**

*Professor of Pediatrics*

B.A., Wellesley, 1971; M.D., Columbia, 1975

**Taube Pearl Rothman**

*Senior Research Scientist, Anatomy and Cell Biology*

B.A., City College (New York), 1969; Ph.D., Cornell, 1975

**Andrew L. Wit**

*Professor of Pharmacology*

B.S., Bates, 1963; Ph.D., Columbia, 1968

**Charles Stuart Hamish Young**

*Professor of Microbiology*

B.A., Oxford, 1966; Ph.D., 1969





## School Policies

### PROFESSIONAL BEHAVIOR AND ETHICS IN THE SCHOOL OF DENTAL AND ORAL SURGERY

#### Dental Students' Responsibilities

A student shall be dedicated to providing competent dental service with compassion and respect for human dignity. In all instances, the student must maintain the dignity of the person, including respect for the patient's privacy.

#### *Nondiscrimination*

It is unethical for a student to refuse to participate in the dental care of a person based on race, religion, ethnicity, socioeconomic status, gender, age, or sexual preference. It is also unethical to refuse to participate in the care of a patient solely because of medical risk, or perceived risk, to the student. It is not, however, unethical for the pregnant student to refuse to participate in activities that pose a significant risk to her fetus.

#### *Confidentiality*

The patient's right to the confidentiality of his or her clinical record is a fundamental tenet of dental care. The discussion of problems or diagnoses of a patient by professional staff/dental students in public violates patient confidentiality and is unethical. Under no circumstances can any clinical record be removed from the institution, nor is photocopying of the record permitted. For presentations and case discussions, students are permitted to extract information but not copy wholesale parts of the chart.

#### *Misrepresentation*

A student should accurately represent herself or himself to patients and others on the clinical team. Students must never introduce themselves as "Doctor," as this is clearly a misrepresentation of the student's position, knowledge, and authority.

### CODE OF CONDUCT

The purpose of this Code of Conduct is to emphasize to all members of the dental school community the importance of maintaining the highest standards of ethical conduct. The philosophy of the School of Dental and Oral Surgery is that the development and maintenance of the highest ethical standards is an integral part of the education of every student and is necessary for entrance into the dental profession.

#### Article I—Ethical Conduct

The foundation of the Code of Conduct of the School of Dental and Oral Surgery is the belief that the ethical conduct of the dental school community at large is the responsibility of all of its individual members: students, faculty, and the administration.

#### Article II—Violations of the Code of Conduct

1. Members of the SDOS community are expected to abide by the highest ethical standards and must demonstrate by their conduct that they are suited to the study and practice of dentistry. Specific violations of the Code of Conduct of SDOS shall include, but not be limited to:
  - a) Obtaining, receiving, or using or attempting to obtain, receive, or use assistance during an examination or other formal exercise from any source which is not authorized by the faculty. This shall include but not be limited to the copying of answers from another student, communicating with another student in order to obtain such information, and using unauthorized notes or devices.
  - b) Any student(s) who gives or attempts to give unauthorized assistance during an examination or other formal exercise, including, but not limited to, allowing another student to copy from an examination.
  - c) Plagiarism within the text of any written paper or presentation.
  - d) Obtaining, receiving, or using or attempting to obtain, receive, or use any unauthorized knowledge of examination questions or other exercise.
  - e) The presentation for grading of any work or projects which are not exclusively the work of the student(s) being graded.
  - f) The willful or reckless misrepresentation or reporting of inaccurate data in any academic, clinical, or research situation.
  - g) The misappropriation by any student(s) of supplies/materials which are intended for the use of the class as a whole.
  - h) Dealing with a patient(s) and/or a member(s) of the SDOS community in a manner which is inappropriate, unprofessional, unethical, or otherwise not in accordance with the *ADA Principles of Ethics and Code of Professional Conduct*.
  - i) The theft, willful damage, vandalism, or abuse of any possession(s) of a member of the SDOS community or the property of the School.
  - j) Any falsification or attempt to falsify grade forms, clinic forms, or patient records.
  - k) Any interference or attempt to interfere with the performance of another student on an examination, formal exercise, or in clinical practice.
  - l) The unreported knowledge of any violations as listed above.
2. The responsibilities of the faculty and administration regarding ethical conduct and violations are as follows:
  - a) All faculty and administration must attempt to foster a professional atmosphere, to dissuade unethical conduct, and to deal with it appropriately if it does arise.
  - b) All students should receive fair and equal treatment.

#### Article III—Procedure

At the School of Dental and Oral Surgery, alleged violations of ethical conduct are dealt with in accordance with the procedures describe below:

- a) Per our "Code of Conduct," if a member of the SDOS community witnesses a violation, it is recommended that he/she approach the violator first, if possible. If a satisfactory resolution is not obtained, the witness should approach the appropriate faculty member(s) or Course Director, who should then approach the alleged violator(s). If satisfactory resolution of the issue does not occur, the matter will be dealt with by the appropriate Department, Division, or Administration Unit.
- b) Alleged infractions of ethical standards shall be handled by the concerned Faculty member, Course Director, Department or Division Director, or Administrator as soon as possible after a complaint is received.
- c) If the Department, Division, or Administrative Unit determines that a breach of ethical standards may have taken place, the matter will be referred to a member of the Ad Hoc Fact-Finding Panel, as below.
- d) An Ad Hoc Fact-Finding Panel consisting of the Class Committee Chairperson, Dean for Academic Affairs, and the Dean for Student and Alumni Affairs shall investigate the charge and recommend to the Class Committee whether a full hearing is indicated. If a Class Committee hearing is indicated, it must include a student to be selected by the Dean for Student Affairs from among the students who have been elected to serve on the Ethics Committee, but from a class other than that of the accused. The hearing will be chaired by the Class Committee Chairperson. If a member of the Fact-Finding Panel or of the Class Committee is involved directly in the issue at hand, he or she must recuse him or herself from the process. The findings and recommendations of the Class Committee will be transmitted to the administration for disposition. The Class Committee may recommend that the Dean take administrative action, which may include warning, probation, monitored status, supervision, dismissal, or other action(s) deemed appropriate.
- e) A student may make in writing within seven days a "due process" appeal of the decision reached, which appeal will be heard by the Dean or the Dean's designees.
- f) Proof/evidence are necessary; therefore the alleged violator(s) shall be "innocent until proven guilty."
- g) All matters will be kept confidential, regardless of the outcome.

#### Article IV—Distribution and Pledge

1. This Code of Conduct will be distributed to all members of the student body, general faculty, and administration.
2. As members of the SDOS community, all students, faculty and administrators shall be bound by the principles contained herein.

*Adopted by Students and Faculty, May 1987*

#### ACADEMIC SUCCESS PROGRAM (ASP)

The School of Dental and Oral Surgery has in place a tutorial support program for students identified early in Year I as experiencing serious academic difficulty.

The program parallels, but is independent of, the College of Physicians and Surgeons "Student Success Network," and is supported logistically through the Office of Student and Alumni Affairs. At the conclusion of Year I three of four of the highest performing students are asked to consider a 4 to 5 hour per week work-study position as tutors to the newly matriculating first-year students. A concluding second-year student with an academic record of distinction is selected to serve as coordinator of these activities. The coordinator has a University Teaching Assistant appointment, reports directly to the Dean of Student Affairs, and works with course directors as indicated.

During the first four to six weeks of the academic year, the program holds informal review sessions for any SDOS students wishing to attend. After the first round of exams, the Academic Dean, Student Affairs Dean, and the First-Year Class Committee identify students in need of support; they are offered tutorial support through the ASP.

In addition to ASP support, individual tutorial support often may be arranged with the individual departments on an hourly fee basis, assuming that there are interested graduate students available. Selected courses frequently offer review sessions on a voluntary basis; students are strongly encouraged to utilize valuable opportunities.

#### POLICY ON SUITABILITY FOR DENTISTRY

In order to be permitted to enter and continue studies at Columbia University School of Dental and Oral Surgery, students must demonstrate good judgment, a sense of responsibility, sensitivity and compassion for individual needs, the ability to synthesize and apply knowledge, and the capability of becoming safe and effective practitioners. The School reserves the right to refuse the degree to any person who in the judgment of the Faculty is not suitable for the practice of dentistry.

The Faculty of the School believes that so far as possible we have the responsibility to try to protect patients, students, and employees and to protect the educational mission and research programs of the institution from any harm that may come to them because of any action or condition of a student or employee.

Potential hazard could arise from an individual being impaired and therefore lacking the ability to perform educational or other professional duties. Such impairments may be derived from neurological disease or degeneration, emotional or psychological disorders, and/or substance abuse. Inappropriate behavior includes behavior regarded by patients as alarming, threatening, bizarre, hostile, or otherwise inconsistent with the responsibilities and duties of the individual and, finally, behavior that is disruptive to working groups, to patient care, or to the educational process.

The Faculty is aware that the public identification of an individual as a potential hazard to others or to the institution may seriously jeopardize the career of that individual and the individual's relationships to other people. The Faculty believes that serious effort must be taken to

protect the rights of such an individual and to ensure that any findings, recommendations, or actions are firmly grounded in clear evidence.

Private acts, conditions, or behaviors of members of the School outside of the immediate institutional context, although not the responsibility of the School, are of legitimate concern to the School in so far as they may imply potential hazard if this individual continues in their role. These tenets support professional conduct standards which students, faculty, and all staff in the School of Dental and Oral Surgery are expected to observe. The Code of Conduct of the School further delineates these standards. For example, patient-student/doctor confidence, trust, and confidentiality are clear expectations. Behavior unacceptable in the School and dental profession would therefore include:

- breaches of trust and confidentiality
- actions such as cheating or unauthorized use of materials in academic, preclinical, or clinical exercises or examinations
- misrepresentations, distortions, or serious omissions in data, research, reports, or other written material
- abuse, misrepresentation, or other seriously improper conduct in relation to patients or colleagues in clinical training settings
- repeated failures to meet assigned obligations in professional, clinical, or research training programs
- other misconduct, misrepresentation, or failures in personal actions or in meeting obligations which in turn raise serious, unresolved doubts about the integrity of the student in meeting the overall obligations of a professional dental career

## PROTOCOL FOR ADDRESSING UNPROFESSIONAL CONDUCT

It is the obligation of a profession to police itself or risk abdication of that privilege to external agencies. The School's Code of Conduct parallels the ADA Code of Conduct and governs these matters.

Instances wherein a student is suspected of behavior inappropriate to the dental profession first should be brought to the attention of that student by the observer. If this is not deemed possible or appropriate, then it should be brought to the proctor, course director, division director, or clinical faculty present at the time. The next level of action would be to report to the Academic Dean, the Dean for Clinical Affairs, or the Dean for Student and Alumni Affairs, depending on the setting in which such incident occurred. A fact-finding investigation shall ensue, and where evidence of misconduct is determined, the protocol outlined in the document "Dean's Discipline" shall be followed. Subsequent to that process and any subsequent appeals, the Dean of the School has the duty of determining indicated actions to redress a violation of the Code of Conduct or expected professional behavior.

All students are expected to be completely familiar with the School of Dental and Oral Surgery Code of Conduct and the ADA Code of Conduct and are referred to the document "Dean's Discipline" for further information on due process.

All students receive a copy of the Code of Conduct of the School during orientation and are required to abide by

its precepts. The Code of Conduct is modeled after the American Dental Association Code of Conduct and was adopted by both students and faculty of SDOS on May 1, 1987. By registering in the School each student is bound by the Code of Conduct. For details please refer to the Academic Policies and Procedures manual which is provided to all newly matriculated students.

## ACADEMIC PROGRESS

The academic progress of every student is monitored through the system of the four Class Committees. A student must pass every course in the curriculum in each year in order to be advanced to the next year, or at the conclusion of four years of study to receive the Doctor of Dental Surgery degree.

Students are reviewed for their academic progress several times each year, particularly at the conclusion of examinations, in order to determine if academic difficulties are being experienced. Recognizing that academic progress is usually the result of individual hard work and preparation nonetheless, tutorial support is offered through the Academic Success Program. This program is jointly operated with the College of Physicians and Surgeons and utilizes both peers and individuals from preceding classes who have performed extremely well in these courses to tutor students experiencing study problems. In certain courses, Ph.D. candidates may also be available as tutors. Finally, a number of the courses provide remediation through small group review sessions, which are voluntary in nature and provide the opportunity for discussion, questions, and reinforcement of course material.

The Class Committee chairperson communicates in writing to students who are experiencing academic problems. Students may be categorized as *progressing satisfactorily*, or they may be placed on *monitored status* if they are having difficulties in one or more courses. At the conclusion of the year, when all course performance is reviewed by the Class Committee, a student may be recommended to the Dean to *advance*, to *repeat the entire year*, or occasionally to have the opportunity to perform make-up exercises in one course, in consideration of the total performance. This decision is made at the discretion of the Course Director in consultation with the Class Committee. Each decision is individual and reflects the total of the student's scholarly progress. Class Committee recommendations to the Dean are subject to appeal and to Due Process review by the Dean.

The School of Dental and Oral Surgery reserves the right to dismiss or require the repeat of a year by any student whose overall performance is deemed insufficient by the Class Committee. Thus, a student with poor performance in several courses, yet with no actual course failures, may be dismissed or required to repeat. Students experiencing academic difficulty should, at their earliest opportunity, speak first with the Course Director regarding their performance and remediation, and secondly, with the Assistant Dean for Student and Alumni Affairs regarding tutorial support, personal counseling opportunities, or other related matters.

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**NOTICE OF OPPORTUNITY TO FILE  
COMPLAINTS WITH THE COMMISSION ON  
DENTAL ACCREDITATION**

The Commission on Dental Accreditation will review complaints that relate to a program's compliance with the accreditation standards. The Commission is interested in the sustained quality and continued improvement of dental and dental-related education programs but does not intervene on behalf of individuals or act as a court of

appeals for individuals in matters of admission, appointment, promotion, or dismissal of faculty, staff, or students.

A copy of the appropriate accreditation standards and/or the Commission's policy and procedure for submission of complaints may be obtained by contacting the Commission at 211 East Chicago Avenue, Chicago, IL 60611 or by calling 1-800-621-8099, extension 2719.

*Adopted: January 1994*

*Commission on Dental Accreditation*



# Official Regulations\*

## RESERVATION OF UNIVERSITY RIGHTS

This bulletin is intended for the guidance of persons applying for or considering application for admission to Columbia University and for the guidance of Columbia students and faculty. The bulletin sets forth in general the manner in which the University intends to proceed with respect to the matters set forth herein, but the University reserves the right to depart without notice from the terms of this bulletin. The bulletin is not intended to be and should not be regarded as a contract between the University and any student or other person.

## UNIVERSITY REGULATIONS

According to University regulations, each person whose registration has been completed will be considered a student of the University during the term for which he or she is registered unless the student's connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he or she is first registered.

The privileges of the University are not available to any student until he or she has completed registration. A student who is not officially registered for a University course may not attend the course unless granted auditing privileges. No student may register after the stated period unless he or she obtains the written consent of the appropriate dean or director.

The University reserves the right to withhold the privilege of registration or any other University privilege from any person with an unpaid debt to the University.

### Attendance

Students are held accountable for absences incurred owing to late enrollment.

### Religious Holidays

It is the policy of the University to respect its members' religious beliefs. In compliance with New York State law, each student who is absent from school because of his or her religious beliefs will be given an equivalent opportunity to register for classes or make up any examination, study, or work requirements that he or she may have missed because of such absence on any particular day or days. No student will be penalized for absence due to religious beliefs, and alternative means will be sought for satisfying the academic requirements involved.

Officers of administration and of instruction responsible for scheduling of academic activities or essential services are expected to avoid conflict with religious holidays as much as

possible. If a suitable arrangement cannot be worked out between the student and the instructor involved, they should consult the appropriate dean or director. If an additional appeal is needed, it may be taken to the Provost.

## ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt of academic credits, graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University.

## RULES OF UNIVERSITY CONDUCT

The Rules of University Conduct (Chapter XLI of the Statutes of the University) provide special disciplinary rules applicable to demonstrations, rallies, picketing, and the circulation of petitions. These rules are designed to protect the rights of free expression through peaceful demonstration while at the same time ensuring the proper functioning of the University and the protection of the rights of those who may be affected by such demonstrations.

The Rules of University Conduct are University-wide and supersede all other rules of any school or division. Minor violations of the Rules of Conduct are referred to the normal disciplinary procedures of each school or division ("Dean's Discipline"). A student who is charged with a serious violation of the Rules has the option of choosing Dean's Discipline or a more formal hearing procedure provided in the Rules.

All University faculty, students, and staff are responsible for compliance with the Rules of University Conduct. Copies of the full text are available in *FACETS*, the University student handbook (<http://www.columbia.edu/cu/facets/>), and at the Office of the University Senate, 406 Low Memorial Library.

## STATEMENT OF NONDISCRIMINATORY POLICIES

The University is publishing the following statements in accordance with certain federal, state, and local statutes and administrative regulations:

Consistent with the requirements of Title IX of the Education Amendments of 1972, as amended, and regulations thereunder, the University does not discriminate on the basis of sex in the conduct or operation of its education programs or activities (including employment therein and admission thereto). Inquiries concerning the application of Title IX may be referred to Susan Rieger, Associate Provost of the University's Office of Equal Opportunity and Affirmative Action (402 Low Memorial Library, Mail Code 4333, 535 West 116th Street, New York, NY 10027; telephone: 212-854-5511), or to the Director, Office for Civil Rights (Region II), 26 Federal Plaza, New York, NY 10278.

Columbia University admits students of any race, color, national and ethnic origin, and age to all the rights,

\*Since policies and procedures are subject to change, please check the Web site for *FACETS*, the University student handbook (<http://www.columbia.edu/cu/facets/>), for the most current information.

privileges, programs, and activities generally accorded or made available to students at the University. It does not discriminate against any person on the basis of race, color, national and ethnic origin, or age in administration of its educational policies, admissions policies, scholarship and loan programs, and athletic and other University-administered programs.

Title VI of the Civil Rights Act of 1964, as amended, prohibits discrimination against any person on the basis of race, color, or national origin in programs or activities receiving federal financial assistance. Title VII of the Civil Rights Act of 1964, as amended, prohibits employment discrimination against any person because of race, color, religion, sex, or national origin. Executive Order 11246, as amended, prohibits discrimination in employment because of race, color, religion, sex, or national origin and requires affirmative action to ensure equality of opportunity in all aspects of employment. In addition, the New York Human Rights Law, Article 15, Executive Law Section 296, prohibits discrimination against any person in employment because of age, race, creed, color, national origin, disability, sex, marital status, and genetic predisposition or carrier status.

Consistent with the requirements of Section 504 of the Rehabilitation Act of 1973, as amended, and regulations thereunder, the University does not discriminate against any person on the basis of disability in admission or access to, or employment or treatment in, its programs and activities. Section 503 of the Rehabilitation Act of 1973, as amended, requires affirmative action to employ and advance in employment qualified workers with disabilities. The Americans with Disabilities Act of 1990 also prohibits discrimination in public accommodation and in employment against qualified persons with disabilities. It requires the University to provide qualified applicants and employees with reasonable accommodations that do not impose undue hardship.

The Equal Pay Act of 1963 prohibits discrimination on the basis of sex in rates of pay. The Age Discrimination in Employment Act of 1967, as amended, prohibits discrimination in employment on the basis of age. The Age Discrimination Act of 1975 prohibits discrimination on the basis of age in programs and activities receiving federal financial assistance.

Section 313 of the New York Education Law, as amended, prohibits educational institutions from discriminating against persons seeking admission as students to any institution, program, or course because of race, religion, creed, sex, color, marital status, age, or national origin. The New York City Human Rights Law, Title 8, Section 8-107, makes it an unlawful discriminatory practice for an employer to discriminate against any person because of their age, race, creed, color, national origin, gender, disability, marital status, sexual orientation, or alienage or citizenship status. It also prohibits educational institutions from discriminating against persons in any of the above categories in the provision of certain accommodations, advantages, facilities, or privileges.

Currently, the policies protect against discrimination and harassment on the basis of race, color, sex, religion, national and ethnic origin, age, citizenship, the actual or perceived status of an individual as a victim of domestic

violence, disability, marital status, sexual orientation, and status as a Vietnam era or disabled veteran.

The Vietnam Era Veterans' Readjustment Assistance Act of 1974, as amended (38 U.S.C. 4212), prohibits job discrimination and requires affirmative action to employ and advance in employment qualified special disabled veterans and veterans of the Vietnam era.

To help clarify what is unlawful sexual harassment the Federal Equal Employment Opportunity Commission (EEOC) has issued Guidelines on the subject. While the EEOC Title VII Guidelines apply only to faculty and other employees, Title IX, administered by the U.S. Education Department's Office for Civil Rights (OCR), also protects students from sexual harassment. Unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature will constitute sexual harassment when:

1. submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment;
2. submission to or rejection of such conduct by an individual is used as the basis for academic or employment decisions affecting that individual; or,
3. such conduct has the purpose or effect of unreasonably interfering with an individual's academic or work performance or creating an intimidating, hostile, or offensive academic or working environment.

All employees, students, and applicants are protected from coercion, intimidation, interference, or retaliation for filing a complaint or assisting in an investigation under any of the foregoing policies and laws.

The University's Office of Equal Opportunity and Affirmative Action has been designated to coordinate compliance activities under each of the programs referred to above. Any employee who believes that he or she has been denied equal opportunity should contact this office, which may informally investigate complaints and offer advice and counsel on questions relating to equal opportunity and affirmative action, including information about applicable formal grievance procedures and agencies where complaints may be filed.

## DISCRIMINATION AND SEXUAL HARASSMENT POLICY AND PROCEDURE

The University's Discrimination and Sexual Harassment Policy and Procedure is available to enrolled students who feel that they have been sexually harassed and/or discriminated against on the basis of race, color, religion, national or ethnic origin, sex, sexual orientation, marital status, age, disability, citizenship, the actual or perceived status of an individual as a victim of domestic violence, or Vietnam era or qualified special disabled veteran status. A copy of the Policy and Procedure is available in *FACETS*, the University student handbook, and in the Office of Equal Opportunity and Affirmative Action, 402 Low Memorial Library; telephone: (212) 854-5511.

A complaint may be brought by filing a written complaint with Susan Rieger, the Associate Provost in charge of the University's Office of Equal Opportunity and Affirmative Action (the "Equal Opportunity Officer"), 402

Low Memorial Library, (212) 854-5511. A complaint shall be brought within 180 working days after the occurrence of the alleged unlawful discrimination. Where a complaint is not timely filed, however, the Equal Opportunity Officer may determine that special circumstances exist that excuse the delay and consider the complaint as timely filed.

### **Charge of the University Panel on Discrimination and Sexual Harassment**

The Columbia Panel on Discrimination and Sexual Harassment is composed of trusted, accessible, and sympathetic members of the University community who act as informal mediators. Their goal is the protection and counsel of any member of the University who is made to feel personally pressured or uncomfortable because of the behavior of another University member. Members of the Panel provide a safe, impartial, nonadversarial setting in which the problem can be considered or solved through confidential counseling and, when requested, mediation between the complainant and the alleged harasser. The Panel thus provides guidance and protection for the accused as well, identifying false or mistaken accusations, misunderstandings, or unconscious behavior. Panel members are also a link through which the University can take account of, and take appropriate action against, those on campus who are behaving illegally. The Panel on Discrimination and Sexual Harassment is a timely, protective, and compassionate arm of the University, one that not only sensitizes and educates the University community but also demonstrates the University's commitment to fair treatment of all its members. Names and contact information for members of the Columbia Panel on Discrimination and Sexual Harassment can be found in Appendix E of *FACETS*, the University student handbook, or by contacting the Office of Equal Opportunity and Affirmative Action.

### **ROMANTIC RELATIONSHIP ADVISORY STATEMENT**

Columbia University's educational mission is promoted by the professionalism in its faculty-student and staff-student relationships. Faculty and staff are cautioned that consensual romantic relationships with student members of the University community, while not expressly prohibited, can prove problematic. While some relationships may begin and remain harmonious, they are susceptible to being characterized as non-consensual and even coercive. This sometimes occurs when such a relationship ends, and is exacerbated by the inherent power differential between the parties.

A faculty or staff member involved in a consensual relationship with a student is expected to remove him/herself from academic or professional decisions concerning the student. This expectation arises because the relationship may impair, or may be perceived as impairing, a faculty or staff member's ability to make objective judgments about that student.

The Provost has authorized some departments to adopt more restrictive policies, given the special nature of the relationship between their students and faculty or staff. Individuals are, therefore, encouraged to contact their department head if they have any questions about whether a more restrictive policy applies to them. Departments

that wish to establish more restrictive policies should contact Susan Rieger before implementation.

Should a romantic relationship with a student lead to a charge of sexual harassment against a faculty or staff member, the University is obligated to investigate and resolve the charge in accordance with its Discrimination and Sexual Harassment Policy and Procedure.

Questions regarding this Advisory Statement may be directed to Susan Rieger, Office of Equal Opportunity and Affirmative Action, 402 Low Memorial Library, Mail Code 4333, 535 West 116th Street, New York, NY 10027; (212) 854-5511.

### **COLUMBIA UNIVERSITY OMBUDS OFFICE**

The Ombuds Office is a neutral and confidential resource for informal conflict resolution, serving the entire Columbia University community—students, faculty, and employees.

For further information, contact Ombuds Officers Marsha Wagner or Wayne Blair at 660 Schermerhorn Extension; telephone: (212) 854-1234; fax: (212) 854-6046; e-mail: ombuds@columbia.edu. On Wednesdays an Ombuds Officer is at the Health Sciences campus office, 101 Bard Hall, 50 Haven Avenue; telephone: (212) 304-7026.

### **THE FEDERAL FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT (FERPA)**

The University abides by the provisions of the Federal Family Educational Rights and Privacy Act of 1974. This act insures a wide range of rights, including but not limited to: information about student records that the University maintains, who maintains them, who has access to them, and for what purposes access is granted. The act also permits the University to release "directory information" without a student's consent. In addition, the act guarantees students access to their records and restricts the access of others.

Students who wish to restrict access to their directory information may do so at the Registrar's Office, 205 Kent; Health Sciences students may do so at the Registrar's Office located in 1-141 Black Building. These same offices can provide a set of guidelines and a policy statement. The guidelines are also available on ColumbiaWeb and in the current edition of *FACETS*. Questions about the interpretation of the guidelines should be referred to the University's General Counsel, 412 Low Library.

### **DISABILITY SERVICES**

The Office of Disability Services is available for consultation and advice to students with disabilities—to answer questions about Columbia as well as New York City and beyond. The staff works in collaboration with students and their schools, developing and implementing programs and policies that enable students with disabilities to achieve their academic and personal potential and facilitate their integration into all aspects of campus life.

Students are expected to identify their disability and to provide current and appropriate medical or diagnostic documentation before any accommodations can be considered. In cases involving students with learning disabilities, appropriate documentation must provide a current assess-

ment of the student's adult level of learning skills and style and must include a report summary and complete test battery scores. To allow sufficient time for a review of needs and implementation of accommodations, students with disabilities are encouraged to contact the office upon acceptance, or as soon as disability becomes an issue, to discuss their specific disability needs and to plan any academic accommodations that may be necessary.

The office is also involved in ongoing outreach to members of the campus community, including students, faculty, and staff, and serves as a resource center on disability services and issues within the University and throughout the metropolitan area. These efforts provide support to students with disabilities and help to promote an environment of understanding and appreciation for people of all backgrounds and abilities.

For information, contact Columbia University Office of Disability Services, 802 Lerner, Mail Code 2605, 2920 Broadway, New York, NY 10027; (212) 854-2388 (voice); (212) 854-2378 (TDD); fax: (212) 854-3448; e-mail: [disability@columbia.edu](mailto:disability@columbia.edu).

## SEXUAL MISCONDUCT POLICY

On February 25, 2000, the University Senate adopted a Sexual Misconduct Policy and Disciplinary Procedure that can be used as an alternative to Dean's Discipline. The Sexual Misconduct Policy applies to all students in all schools of the University. The Disciplinary Procedure for Sexual Misconduct applies to all students, with the exception of those enrolled in the Law School, but including the students of Teachers College and Barnard College. The policy prohibits sexual misconduct by any student and provides for comprehensive education of students, faculty, and administrators about the issue of sexual misconduct.

Copies of the policy and procedure are available from the Office of Sexual Misconduct Prevention and Education, 703 Lerner, Mail Code 2617, 2920 Broadway, New York, NY 10027; telephone: (212) 854-1717; fax: (212) 854-2728; <http://www.columbia.edu/cu/sexualmisconduct/>. The policy and procedure can also be found in the Office of the Dean of Students of every school and in *FACETS*, the University student handbook.

## Policy

The University's Policy on Sexual Misconduct requires that standards of sexual conduct be observed on campus, that violations of these standards be subject to discipline, and that resources and structures be sufficient to meet the physical and emotional needs of individuals who have experienced sexual misconduct. Columbia University's policy defines sexual misconduct as non-consensual, intentional physical conduct of a sexual nature, such as unwelcome physical contact with a person's genitals, buttocks, or breasts. Lack of consent may be inferred from the use of force, threat, physical intimidation, or advantage gained by the victim's mental or physical incapacity or impairment of which the perpetrator was aware or should have been aware.

## Complaint Resolution Options

Three University-based options are available for resolution of complaints of sexual misconduct against a student:

1. Dean's Discipline within the school of the charged student;
2. mediation through an accredited mediator affiliated with the University, such as the Ombuds Officer; *or*
3. the University's Alternative Disciplinary Procedure for Sexual Misconduct.

Complaints may also be filed with the New York City Police Department.

Choosing to pursue a disciplinary action can be a difficult and confusing decision. The Office of Sexual Misconduct Prevention and Education is available to assist you in understanding your options for complaint resolution.

Complaints about non-student members of the University community should be directed to the Office of Equal Opportunity and Affirmative Action at Columbia, the Dean of Studies Office at Barnard, or the Office of the Associate Dean at Teachers College.



# Columbia Presbyterian Medical Center

# Columbia University Health Sciences Campus



- 1 Bard Haven Towers
- 2 Bard Hall Medical Student Residences
- 3 The Lawrence C. Kolb Research Building
- 4 Armand Hammer Health Sciences Center (classrooms)/Augustus C. Long Library
- 5 Mailman School of Public Health
- 6 The Neurological Institute of New York
- 7 The Milstein Hospital Building
- 8 The Herbert Irving Pavilion (formerly Atchley Pavilion)
- 9 School of Nursing/Georgian Residence Building
- 10 William Black Medical Research Building
- 11 Alumni Auditorium

- 12 College of Physicians and Surgeons
- 13 **Vanderbilt Clinic/School of Dental and Oral Surgery**
- 14 New York City Department of Health/Mailman School of Public Health
- 15 The Harkness Pavilion
- 16 The Presbyterian Hospital Building
- 17 The Pauline A. Hartford Memorial Chapel
- 18 Radiotherapy Center
- 19 Children's Hospital\* (North)
- 20 Children's Hospital\* (South)/Sloane Hospital for Women
- 21 Eye Institute Research Laboratories
- 22 The Edward S. Harkness Eye Institute

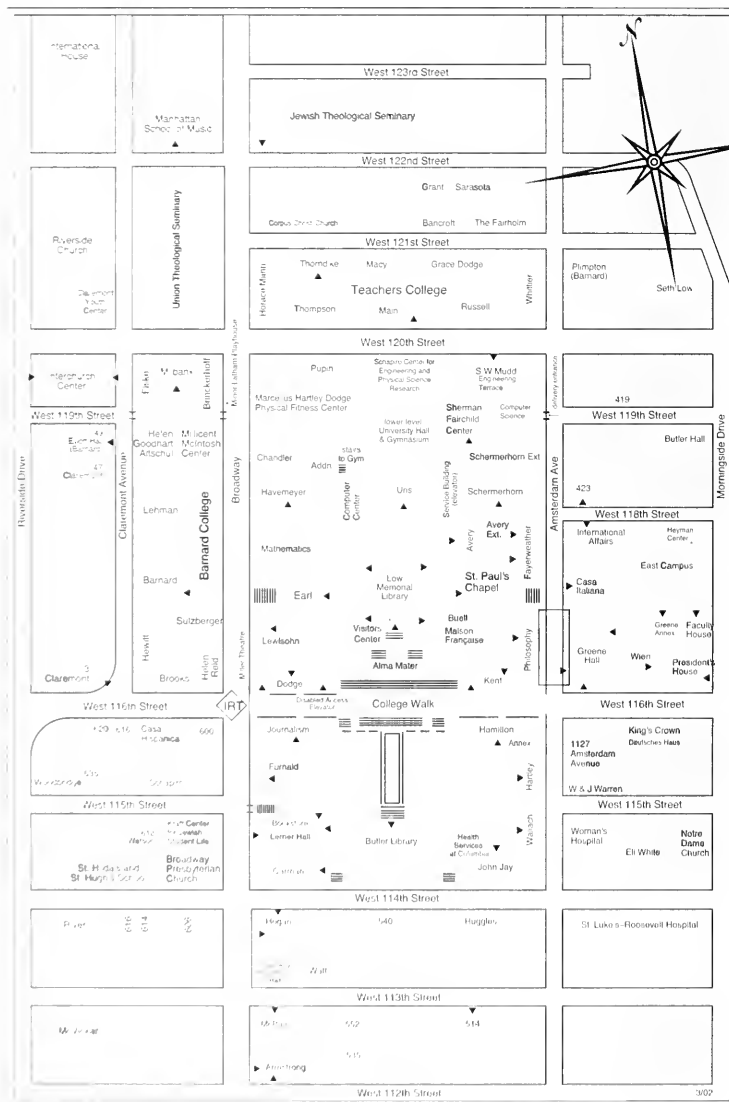
- 23 Service Building
- 24 Mary Woodard Lasker Biomedical Research Building\*\*/University Bookstore
- 25 Audubon NYC Building
- 26 106 Haven—Residence Building
- 27 154 Haven—Residence Administrative Building
- 28 Irving Cancer Research Center (under construction)
- 29 Russ Berrie Medical Science Pavilion\*\*
- 30 The New York State Psychiatric Institute
- 31 Morgan Stanley Children's Hospital Building\* (under construction)
- 32 Future Audubon V\*\*
- 33 Future Audubon V\*\*

\* Subway Station (168th Street); IRT #1 Local (Broadway); IND-A Express, C Local

\* Morgan Stanley Children's Hospital of New York-Presbyterian \*\* Part of the Columbia University Audubon Biomedical Science and Technology Park

# Columbia University

## The Morningside Campus & Environs





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# Columbia in New York City

1. Baker Field (Lawrence A. Wien Stadium, Columbia Boat House, and Columbia Tennis Center)
2. The Cloisters
3. Columbia Presbyterian Medical Center
4. American Geographical Society, The Hispanic Society of America, The American Numismatic Society, The Academy of Arts and Letters
5. City College of New York
6. Grant's Tomb and Riverside Park
7. Riverside Church
8. The Cathedral of St. John the Divine
9. Equity Library Theatre
10. Yankee Stadium
11. The Museum of the City of New York
12. The Guggenheim Museum
13. The Metropolitan Museum of Art
14. The American Museum of Natural History/Hayden Planetarium
15. The Whitney Museum
16. Gracie Mansion
17. Hunter College
18. The Frick Collection
19. Temple Emmanuel
20. Central Park Zoo
21. Lincoln Center for the Performing Arts/The Metropolitan Opera House, Avery Fisher Hall, Alice Tully Hall, New York State Theatre, Vivian Beaumont Theatre, The Juilliard School, The Library and Museum of Performing Arts
22. Columbus Circle
23. Broadway Theatre District
24. Times Square
25. Carnegie Hall
26. Rockefeller Center/Radio City Music Hall
27. The Museum of Modern Art
28. St. Patrick's Cathedral
29. Grand Central Terminal
30. Chrysler Building
31. The United Nations
32. The New York Public Library
33. Port Authority Bus Terminal
34. Madison Square Garden/Pennsylvania Station
35. Pierpont Morgan Library
36. Empire State Building
37. St. Mark's Church
38. Washington Square Park/Greenwich Village
39. New York University
40. Lower East Side
41. Chinatown
42. Little Italy
43. Centre Street/Courthouse District
44. City Hall
45. Trinity Church
46. Wall Street/Stock Exchange
47. Site of former World Trade Center
48. Fraunces Tavern
49. Statue of Liberty
50. Staten Island Ferry
51. South Street Seaport

A To LaGuardia Airport  
 B To JFK Airport  
 C To Newark Airport

